

# RADIO TEST REPORT

## FCC 47 CFR PART 15 SUBPART C

### INDUSTRY CANADA RSS-247

|                             |                                                                                                                                                                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Standard               | FCC Part 15.247<br>RSS-247 issue 2 and RSS-GEN issue 5                                                                                                                                                                                                    |
| Product name                | Tablet PC                                                                                                                                                                                                                                                 |
| Brand Name                  | ADVANTECH                                                                                                                                                                                                                                                 |
| Model No.                   | FCC: AIM-75S-2 ; AIM-75H-2 ;<br>AIM-75S-2XXXXXXXXXXXXXXXXXX ;<br>AIM75S-2XXXXXXXXXXXXXXXXXX ;<br>AIM-75H-2XXXXXXXXXXXXXXXXXX ;<br>AIM75H-2XXXXXXXXXXXXXXXXXX (where "X" may be any<br>alphanumeric character , "-" or blank)<br>IC: AIM-75S-2 ; AIM-75H-2 |
| Test Result                 | Pass                                                                                                                                                                                                                                                      |
| Statements of<br>Conformity | Determination of compliance is based on the results of<br>the compliance measurement, not taking into account<br>measurement instrumentation uncertainty.                                                                                                 |

The test Result was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were given in ANSI C63.10: 2013 and compliance standards.

The test results of this report relate only to the tested sample (EUT) identified in this report. The test Report of full or partial shall not copy. Without written approval of Compliance Certification Services Inc.( Wugu Laboratory)

Approved by:



Kevin Tsai  
Deputy Manager

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.  
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Rev.: 00

### **Revision History**

| Rev. | Issue Date    | Revisions     | Effect Page | Revised By |
|------|---------------|---------------|-------------|------------|
| 00   | June 18, 2021 | Initial Issue | ALL         | Doris Chu  |

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## 1. GENERAL INFORMATION

### 1.1 EUT INFORMATION

|                   |                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                |              |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| Applicant         | Advantech Co., Ltd.<br>No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.                                                                                                                                              |                                                                                                                                                                                                                |              |
| Manufacturer      | Advantech Co., Ltd.<br>No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 114, Taiwan, R.O.C.                                                                                                                                              |                                                                                                                                                                                                                |              |
| Equipment         | Tablet PC                                                                                                                                                                                                                                                |                                                                                                                                                                                                                |              |
| Model No.         | <b>FCC:</b> AIM-75S-2 ; AIM-75H-2 ; AIM-75S-2XXXXXXXXXXXXXXXXXX ; AIM75S-2XXXXXXXXXXXXXXXXXX ; AIM-75H-2XXXXXXXXXXXXXXXXXX ; AIM75H-2XXXXXXXXXXXXXXXXXX (where “X” may be any alphanumeric character , “-” or blank)<br><b>IC:</b> AIM-75S-2 ; AIM-75H-2 |                                                                                                                                                                                                                |              |
| Model Discrepancy | Model                                                                                                                                                                                                                                                    | Adapter                                                                                                                                                                                                        | Tablet color |
|                   | AIM-75H-2                                                                                                                                                                                                                                                | GlobTek, Inc /<br>GTM96605-GEN2-A1-T2<br>I/P: 100-240VAC, 50-60Hz, 1.5A<br>O/P: 5VDC, 4.6A<br>5.8VDC, 4.6A<br>9VDC, 4.4A<br>12VDC, 4A<br>15VDC, 3.6A<br>20VDC, 3A                                              | White        |
|                   | AIM-75S-2                                                                                                                                                                                                                                                | FSP / FSP045-A1BR<br>I/P: 100-240VAC, 50-60Hz, 1.2A<br>O/P: 5.0VDC, 3.0A 15.0W<br>9.0VDC, 3.0A 27.0W<br>12.0VDC, 3.0A 36.0W<br>15.0VDC, 3.0A 45.0W<br>20.0VDC, 2.25A 45.0W                                     | Black        |
|                   | AIM-75S-2XXXXXXXXXXXXXXXXXX ;<br>AIM75S-2XXXXXXXXXXXXXXXXXX ;<br>AIM-75H-2XXXXXXXXXXXXXXXXXX ;<br>AIM75H-2XXXXXXXXXXXXXXXXXX<br>(where “X” may be any alphanumeric character , “-” or blank)                                                             | All the above models are identical except for the designation of model numbers. The suffix of (where “X” may be any alphanumeric character , “-” or blank) on model number is just for marketing purpose only. |              |
| Trade Name        | ADVANTECH                                                                                                                                                                                                                                                |                                                                                                                                                                                                                |              |
| Received Date     | May 22, 2020                                                                                                                                                                                                                                             |                                                                                                                                                                                                                |              |
| Date of Test      | December 03, 2020 ~ April 22, 2021                                                                                                                                                                                                                       |                                                                                                                                                                                                                |              |

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|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Power Supply                     | 1. Power from Adapter.<br>(1) GlobTek, Inc / GTM96605-GEN2-A1-T2<br>I/P: 100-240VAC, 50-60Hz, 1.5A<br>O/P: 5VDC, 4.6A<br>5.8VDC, 4.6A<br>9VDC, 4.4A<br>12VDC, 4A<br>15VDC, 3.6A<br>20VDC, 3A<br>(2) FSP / FSP045-A1BR<br>I/P: 100-240VAC, 50-60Hz, 1.2A<br>O/P: 5.0VDC, 3.0A 15.0W<br>9.0VDC, 3.0A 27.0W<br>12.0VDC, 3.0A 36.0W<br>15.0VDC, 3.0A 45.0W<br>20.0VDC, 2.25A 45.0W<br>2. Power from Battery.<br>ADVANTECH / AIM-BAT-8<br>Rating: 3.8VDC, 4900mAh/18.62Wh |
| HW Version                       | AX2                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| SW Version                       | 0.3.6.9_20201021.021551                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| EUT Serial #                     | 200CT32E00140                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Operating conditions for the EUT | QRCT v4.0.67.0                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

**Remark:**

1. For more details, refer to the User's manual of the EUT.
2. Disclaimer: Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received.
3. Disclaimer: Variant information between/among model numbers / trademarks is provided by the applicant, test results of this report are applicable to the sample EUT received of main test model name.

## **1.2 INFORMATION ABOUT THE FHSS CHARACTERISTICS**

### **1.2.1 Pseudorandom Frequency Hopping Sequence**

The channel is represented by a pseudo-random hopping sequence hopping through the 79 RF channels. The hopping sequence is unique for the piconet and is determined by the Bluetooth device address of the master; the phase in the hopping sequence is determined by the Bluetooth clock of the master. The channel is divided into time slots where each slot corresponds to an RF hop frequency. Consecutive hops correspond to different RF hop frequencies. The nominal hop rate is 1 600 hops/s.

### **1.2.2 Equal Hopping Frequency Use**

The channels of this system will be used equally over the long-term distribution of the hopsets.

### **1.2.3 Example of a 79 hopping sequence in data mode:**

02, 05, 31, 24, 20, 10, 43, 36, 30, 23, 40, 06, 21, 50, 44, 09, 71, 78, 01, 13, 73, 07, 70, 72, 35, 62, 42, 11, 41, 08, 16, 29, 60, 15, 34, 61, 58, 04, 67, 12, 22, 53, 57, 18, 27, 76, 39, 32, 17, 77, 52, 33, 56, 46, 37, 47, 64, 49, 45, 38, 69, 14, 51, 26, 79, 19, 28, 65, 75, 54, 48, 03, 25, 66, 05, 16, 68, 74, 59, 63, 55

### **1.2.4 System Receiver Input Bandwidth**

Each channel bandwidth is 1MHz.

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

### **1.2.5 Equipment Description**

RSS-247, 5.1 (a): The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

### 1.3 EUT CHANNEL INFORMATION

|                   |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| Frequency Range   | 2402MHz-2480MHz                                                                    |
| Modulation Type   | 1. GFSK for BDR-1Mbps<br>2. $\pi/4$ -DQPSK for EDR-2Mbps<br>3. 8DPSK for EDR-3Mbps |
| Number of channel | 79 Channels                                                                        |

**Remark:**

Refer as ANSI C63.10: 2013 clause 5.6.1 Table 4 and RSS-GEN Table 1 for test channels

| Number of frequencies to be tested                   |                       |                                              |
|------------------------------------------------------|-----------------------|----------------------------------------------|
| Frequency range in which device operates             | Number of frequencies | Location in frequency range of operation     |
| <input type="checkbox"/> 1 MHz or less               | 1                     | Middle                                       |
| <input type="checkbox"/> 1 MHz to 10 MHz             | 2                     | 1 near top and 1 near bottom                 |
| <input checked="" type="checkbox"/> More than 10 MHz | 3                     | 1 near top, 1 near middle, and 1 near bottom |

### 1.4 ANTENNA INFORMATION

|                   |                          |
|-------------------|--------------------------|
| Antenna Type      | Omni-directional antenna |
| Antenna Gain      | Gain: 1.78 dBi           |
| Antenna Connector | N/A                      |

## 1.5 MEASUREMENT UNCERTAINTY

| PARAMETER                             | UNCERTAINTY |
|---------------------------------------|-------------|
| AC Powerline Conducted Emission       | +/- 1.2575  |
| Emission bandwidth, 20dB bandwidth    | +/- 0.0014  |
| RF output power, conducted            | +/- 1.14    |
| Power density, conducted              | +/- 1.40    |
| 3M Semi Anechoic Chamber / 30M~200M   | +/- 4.12    |
| 3M Semi Anechoic Chamber / 200M~1000M | +/- 4.68    |
| 3M Semi Anechoic Chamber / 1G~8G      | +/- 5.18    |
| 3M Semi Anechoic Chamber / 8G~18G     | +/- 5.47    |
| 3M Semi Anechoic Chamber / 18G~26G    | +/- 3.81    |
| 3M Semi Anechoic Chamber / 26G~40G    | +/- 3.87    |

**Remark:**

1. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$
2. ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report.

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## 1.6 FACILITIES AND TEST LOCATION

All measurement facilities used to collect the measurement data are located at No.11, Wugong 6th Rd., Wugu Dist., New Taipei City, Taiwan. (R.O.C.)  
CAB identifier: TW1309

| Test site          | Test Engineer           | Remark |
|--------------------|-------------------------|--------|
| AC Conduction Room | Jerry Chang, Dally Hong | -      |
| Radiation          | Ray Li                  | -      |
| RF Conducted       | Rick Lee                | -      |

**Remark:** The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

## 1.7 INSTRUMENT CALIBRATION

| RF Conducted Test Site |              |         |               |                  |                 |
|------------------------|--------------|---------|---------------|------------------|-----------------|
| Name of Equipment      | Manufacturer | Model   | Serial Number | Calibration Date | Calibration Due |
| Coaxial Cable          | Woken        | WC12    | CC003         | 06/29/2020       | 06/28/2021      |
| EXA Signal Analyzer    | KEYSIGHT     | N9010B  | MY55460167    | 09/07/2020       | 09/06/2021      |
| Power Meter            | Anritsu      | ML2487A | 6K00003260    | 05/21/2020       | 05/20/2021      |
| Power Sensor           | Anritsu      | MA2490A | 032910        | 05/21/2020       | 05/20/2021      |
| Software               | N/A          |         |               |                  |                 |

Test date for December 03, 2020

| 3M 966 Chamber Test Site         |                  |                 |                 |            |            |
|----------------------------------|------------------|-----------------|-----------------|------------|------------|
| Equipment                        | Manufacturer     | Model           | Serial Number   | Cal Date   | Cal Due    |
| Band Reject Filters              | MICRO TRONICS    | BRM 50702       | 120             | 02/25/2020 | 02/24/2021 |
| Bilog Antenna                    | Sunol Sciences   | JB3             | A030105         | 07/24/2020 | 07/23/2021 |
| Coaxial Cable                    | HUBER SUHNER     | SUCOFLEX 104PEA | 20995           | 02/25/2020 | 02/24/2021 |
| Coaxial Cable                    | EMCI             | EMC105          | 190914+327109/4 | 09/19/2020 | 09/18/2021 |
| Digital Thermo-Hygro Meter       | WISEWIND         | 1206            | D07             | 01/15/2020 | 01/14/2021 |
| double Ridged Guide Horn Antenna | ETC              | MCTD 1209       | DRH13M02003     | 09/30/2020 | 09/29/2021 |
| Loop Ant                         | COM-POWER        | AL-130          | 121051          | 03/27/2020 | 03/26/2021 |
| Pre-Amplifier                    | EMEC             | EM330           | 060609          | 02/25/2020 | 02/24/2021 |
| Pre-Amplifier                    | EMEC             | EM01G26G        | 060570          | 06/29/2020 | 06/28/2021 |
| PSA Series Spectrum Analyzer     | Agilent          | E4446A          | MY46180323      | 07/24/2020 | 07/23/2021 |
| Antenna Tower                    | CCS              | CC-A-1F         | N/A             | N.C.R      | N.C.R      |
| Controller                       | CCS              | CC-C-1F         | N/A             | N.C.R      | N.C.R      |
| Turn Table                       | CCS              | CC-T-1F         | N/A             | N.C.R      | N.C.R      |
| Software                         | e3 6.11-20180413 |                 |                 |            |            |

**Remark:** Each piece of equipment is scheduled for calibration once a year.

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**Test date for April 22, 2021**

| 3M 966 Chamber Test Site         |                  |                 |                 |            |            |
|----------------------------------|------------------|-----------------|-----------------|------------|------------|
| Equipment                        | Manufacturer     | Model           | Serial Number   | Cal Date   | Cal Due    |
| Band Reject Filters              | MICRO TRONICS    | BRM 50702       | 120             | 02/08/2021 | 02/07/2022 |
| Bilog Antenna                    | Sunol Sciences   | JB3             | A030105         | 07/24/2020 | 07/23/2021 |
| Coaxial Cable                    | HUBER SUHNER     | SUCOFLEX 104PEA | 20995           | 02/24/2021 | 02/23/2022 |
| Coaxial Cable                    | EMCI             | EMC105          | 190914+327109/4 | 09/19/2020 | 09/18/2021 |
| Digital Thermo-Hygro Meter       | WISEWIND         | 1206            | D07             | 01/06/2021 | 01/05/2022 |
| Horn Antenna                     | ETS LINDGREN     | 3116            | 00026370        | 12/11/2020 | 12/10/2021 |
| double Ridged Guide Horn Antenna | ETC              | MCTD 1209       | DRH13M02003     | 09/30/2020 | 09/29/2021 |
| K Type Cable                     | Huber+Suhner     | SUCOFLEX 102    | 29406/2         | 12/09/2020 | 12/08/2021 |
| K Type Cable                     | Huber+Suhner     | SUCOFLEX 102    | 22470/2         | 12/09/2020 | 12/08/2021 |
| Loop Ant                         | COM-POWER        | AL-130          | 121051          | 04/07/2021 | 04/06/2022 |
| Pre-Amplifier                    | EMEC             | EM330           | 060609          | 02/24/2021 | 02/23/2022 |
| Pre-Amplifier                    | HP               | 8449B           | 3008A00965      | 12/25/2020 | 12/24/2021 |
| PSA Series Spectrum Analyzer     | Agilent          | E4446A          | MY46180323      | 07/24/2020 | 07/23/2021 |
| Antenna Tower                    | CCS              | CC-A-1F         | N/A             | N.C.R      | N.C.R      |
| Controller                       | CCS              | CC-C-1F         | N/A             | N.C.R      | N.C.R      |
| Turn Table                       | CCS              | CC-T-1F         | N/A             | N.C.R      | N.C.R      |
| Software                         | e3 6.11-20180413 |                 |                 |            |            |

**Test date for January 5, 2021**

| Conducted Emission Room |                    |           |               |                  |                 |
|-------------------------|--------------------|-----------|---------------|------------------|-----------------|
| Name of Equipment       | Manufacturer       | Model     | Serial Number | Calibration Date | Calibration Due |
| CABLE                   | EMCI               | CFD300-NL | CERF          | 06/29/2020       | 06/28/2021      |
| EMI Test Receiver       | R&S                | ESCI      | 100064        | 07/17/2020       | 07/16/2021      |
| LISN                    | SCHAFFNER          | NNB 41    | 03/10013      | 02/13/2020       | 02/12/2021      |
| Software                | EZ-EMC(CCS-3A1-CE) |           |               |                  |                 |

**Test date for April 15, 2021**

| Conducted Emission Room |                    |           |               |                  |                 |
|-------------------------|--------------------|-----------|---------------|------------------|-----------------|
| Name of Equipment       | Manufacturer       | Model     | Serial Number | Calibration Date | Calibration Due |
| CABLE                   | EMCI               | CFD300-NL | CERF          | 06/29/2020       | 06/28/2021      |
| EMI Test Receiver       | R&S                | ESCI      | 100064        | 07/17/2020       | 07/16/2021      |
| LISN                    | SCHAFFNER          | NNB 41    | 03/10013      | 02/02/2021       | 02/01/2022      |
| Software                | EZ-EMC(CCS-3A1-CE) |           |               |                  |                 |

**Remark:** Each piece of equipment is scheduled for calibration once a year.

## 1.8 SUPPORT AND EUT ACCESSORIES EQUIPMENT

| EUT Accessories Equipment |           |       |       |            |        |
|---------------------------|-----------|-------|-------|------------|--------|
| No.                       | Equipment | Brand | Model | Series No. | FCC ID |
|                           | N/A       |       |       |            |        |

| Support Equipment |           |         |               |            |        |
|-------------------|-----------|---------|---------------|------------|--------|
| No.               | Equipment | Brand   | Model         | Series No. | FCC ID |
| 1                 | NB(J)     | TOSHIBA | PT345T-00L002 | N/A        | N/A    |

## 1.9 TEST METHODOLOGY AND APPLIED STANDARDS

The test methodology, setups and results comply with all requirements in accordance with ANSI C63.10:2013, FCC Part 2, FCC Part 15.247, RSS-247 Issue 2 and RSS-GEN Issue 5.

## 2. TEST SUMMARY

| FCC Standard Section | IC Standard Section  | Report Section | Test Item                   | Result |
|----------------------|----------------------|----------------|-----------------------------|--------|
| 15.203               | -                    | 1.3            | Antenna Requirement         | Pass   |
| 15.207(a)            | RSS-GEN 8.8          | 4.1            | AC Conducted Emission       | Pass   |
| 15.247(a)(1)         | RSS-247(5.1)(a)      | 4.2            | 20 dB Bandwidth             | Pass   |
| -                    | RSS-GEN 6.7          | 4.2            | Occupied Bandwidth (99%)    | Pass   |
| 15.247(b)(1)         | RSS-247(5.4)(b)      | 4.3            | Output Power Measurement    | Pass   |
| 15.247(a)(1)         | RSS-247(5.1)(b)      | 4.4            | Frequency Separation        | Pass   |
| 15.247(a)(1)(iii)    | RSS-247(5.1)(d)      | 4.5            | Number of Hopping           | Pass   |
| 15.247(d)            | RSS-247(5.5)         | 4.6            | Conducted Band Edge         | Pass   |
| 15.247(d)            | RSS-247(5.5)         | 4.6            | Conducted Spurious Emission | Pass   |
| 15.247(a)(1)(iii)    | RSS-247(5.1)(d)      | 4.7            | Time of Occupancy           | Pass   |
| 15.247(d)            | RSS-GEN 8.9,<br>8.10 | 4.8            | Radiation Band Edge         | Pass   |
| 15.247(d)            | RSS-GEN 8.9,<br>8.10 | 4.8            | Radiation Spurious Emission | Pass   |

### 3. DESCRIPTION OF TEST MODES

#### 3.1 THE WORST MODE OF OPERATING CONDITION

|                          |                                                                                                                                                                                                                                           |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operation mode           | GFSK for BDR-1Mbps (DH5)<br>8DPSK for EDR-3Mbps (3DH5)                                                                                                                                                                                    |
| Test Channel Frequencies | <b>GFSK for BDR-1Mbps:</b><br>1.Lowest Channel: 2402MHz<br>2.Middle Channel: 2441MHz<br>3.Highest Channel: 2480MHz<br><b>8DPSK for EDR-3Mbps:</b><br>1.Lowest Channel: 2402MHz<br>2.Middle Channel: 2441MHz<br>3.Highest Channel: 2480MHz |

Remark:

1. EUT pre-scanned data rate of output power for each mode, the worst data rate were recorded in this report.

### 3.2 THE WORST MODE OF MEASUREMENT

| AC Power Line Conducted Emission |                                                                                                                                                                                              |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Condition                   | AC Power line conducted emission for line and neutral                                                                                                                                        |
| Power supply Mode                | Mode 1: EUT power by Adapter. (GlobTek) 120VAC<br>Mode 2: EUT power by Adapter. (GlobTek) 240VAC<br>Mode 3: EUT power by Adapter. (FSP) 120VAC<br>Mode 4: EUT power by Adapter. (FSP) 240VAC |
| Worst Mode                       | <input type="checkbox"/> Mode 1 <input type="checkbox"/> Mode 2 <input checked="" type="checkbox"/> Mode 3 <input checked="" type="checkbox"/> Mode 4                                        |

| Radiated Emission Measurement Above 1G |                                                                                                                                                                                                                                                                                               |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Condition                         | Radiated Emission Above 1G                                                                                                                                                                                                                                                                    |
| Power supply Mode                      | Mode 1: EUT power by Adapter. (GlobTek)<br>Mode 2: EUT power by Adapter. (FSP)<br>Mode 3: EUT power by Battery                                                                                                                                                                                |
| Worst Mode                             | <input type="checkbox"/> Mode 1 <input checked="" type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4                                                                                                                                                    |
| Worst Position                         | <input type="checkbox"/> Placed in fixed position.<br><input checked="" type="checkbox"/> Placed in fixed position at X-Plane (E2-Plane)<br><input type="checkbox"/> Placed in fixed position at Y-Plane (E1-Plane)<br><input type="checkbox"/> Placed in fixed position at Z-Plane (H-Plane) |

| Radiated Emission Measurement Below 1G |                                                                                                                                            |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Test Condition                         | Radiated Emission Below 1G                                                                                                                 |
| Power supply Mode                      | Mode 1: EUT power by Adapter. (GlobTek)<br>Mode 2: EUT power by Adapter. (FSP)<br>Mode 3: EUT power by Battery                             |
| Worst Mode                             | <input type="checkbox"/> Mode 1 <input checked="" type="checkbox"/> Mode 2 <input type="checkbox"/> Mode 3 <input type="checkbox"/> Mode 4 |

Remark:

1. The worst mode was record in this test report.
2. EUT pre-scanned in three axis ,X,Y, Z and two polarity, for radiated measurement. The worst case(X-Plane) were recorded in this report.
3. AC power line conducted emission and for below 1G radiation emission were performed the EUT transmit at the highest output power channel as worse case.

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### 3.3 EUT DUTY CYCLE

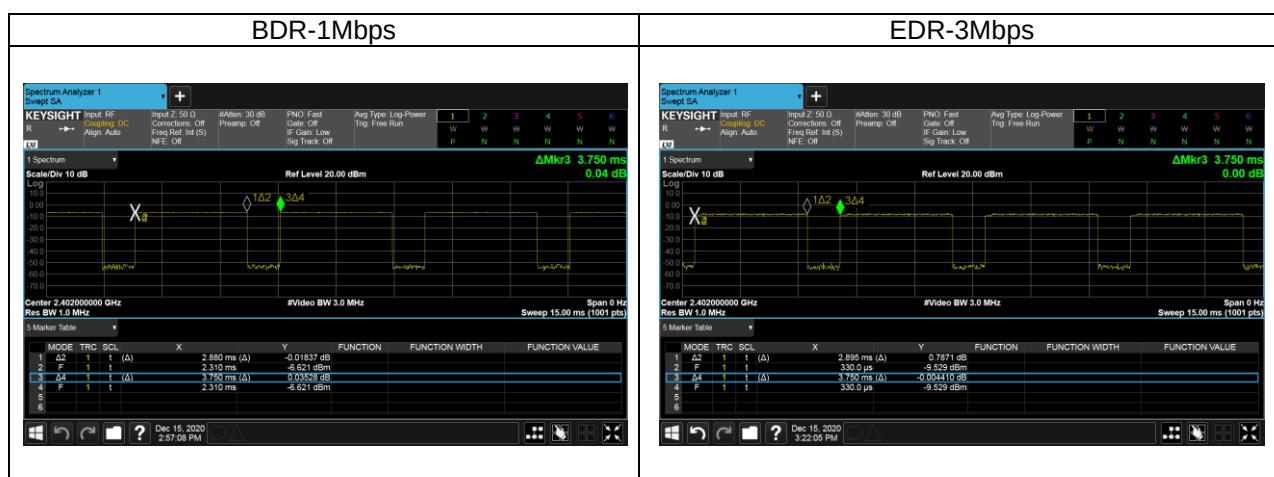
Temperature: 23.5°C

Humidity: 58.2% RH

Tested by: Rick Lee

Test date: December 15, 2020

| Duty Cycle    |                |                                                           |           |                   |
|---------------|----------------|-----------------------------------------------------------|-----------|-------------------|
| Configuration | Duty Cycle (%) | Duty Factor (dB)<br>$=10 \cdot \log(1/\text{Duty Cycle})$ | 1/T (kHz) | VBW setting (kHz) |
| BDR-1Mbps     | 76.80%         | 1.15                                                      | 0.35      | 1.00              |
| EDR-3Mbps     | 77.20%         | 1.12                                                      | 0.35      | 1.00              |



## 4. TEST RESULT

### 4.1 AC POWER LINE CONDUCTED EMISSION

#### 4.1.1 Test Limit

According to §15.207(a) and RSS-GEN section 8.8,

| Frequency Range<br>(MHz) | Limits(dBμV) |           |
|--------------------------|--------------|-----------|
|                          | Quasi-peak   | Average   |
| 0.15 to 0.50             | 66 to 56*    | 56 to 46* |
| 0.50 to 5                | 56           | 46        |
| 5 to 30                  | 60           | 50        |

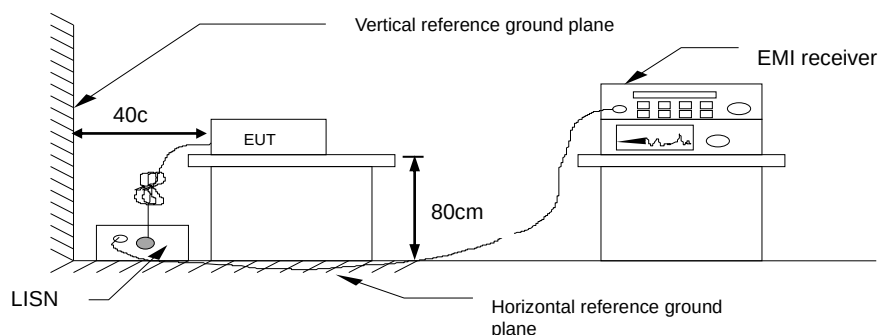
\* Decreases with the logarithm of the frequency.

#### 4.1.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 6.2,

1. The EUT was placed on a non-conducted table, which is 0.8m above horizontal ground plane and 0.4m above vertical ground plane.
2. EUT connected to the line impedance stabilization network (LISN)
3. Receiver set RBW of 9kHz and Detector Peak, and note as quasi-peak and average.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. Recorded Line for Neutral and Line.

#### 4.1.3 Test Setup



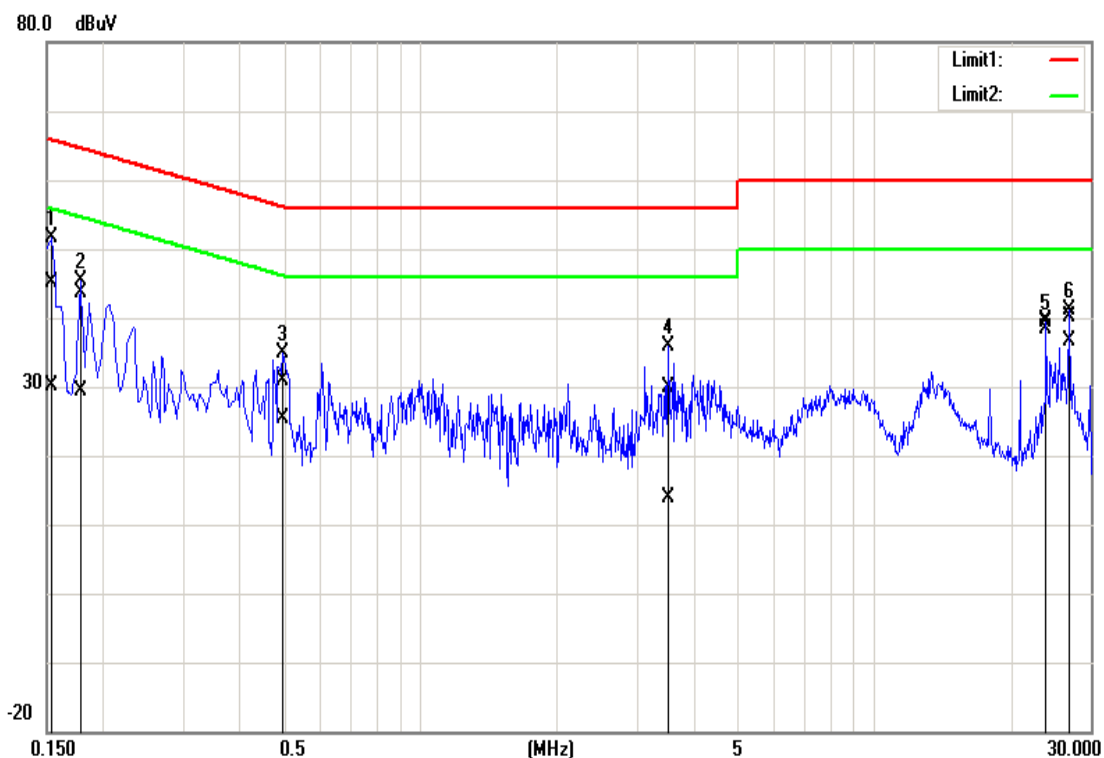
#### 4.1.4 Test Result

**PASS**

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## Test Data

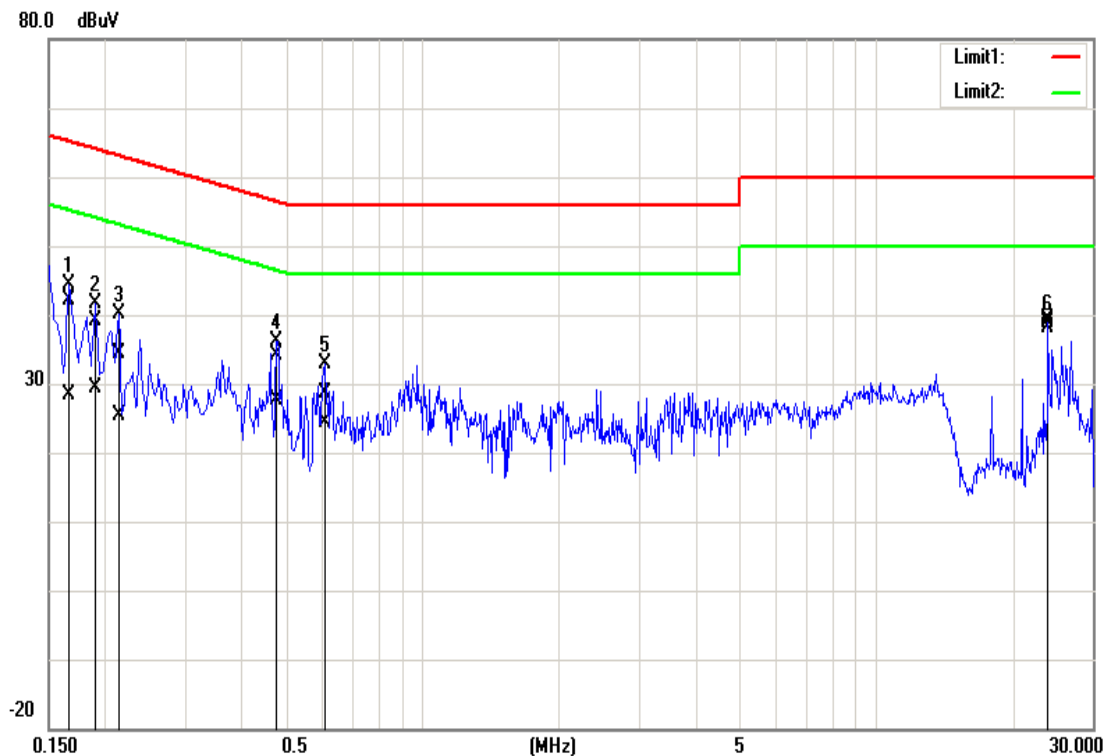
|            |        |               |                  |
|------------|--------|---------------|------------------|
| Test Mode: | Mode 3 | Temp/Hum      | 20(°C)/ 63%RH    |
| Phase:     | Line   | Test Date     | January 05, 2021 |
|            |        | Test Engineer | Jerry Chang      |



| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.1540          | 34.81                     | 19.88                  | 10.21                  | 45.02                    | 30.09                 | 65.78                   | 55.78                | -20.76                 | -25.69              | Pass   |
| 0.1780          | 33.49                     | 19.08                  | 10.21                  | 43.70                    | 29.29                 | 64.58                   | 54.58                | -20.88                 | -25.29              | Pass   |
| 0.4980          | 20.61                     | 15.07                  | 10.22                  | 30.83                    | 25.29                 | 56.03                   | 46.03                | -25.20                 | -20.74              | Pass   |
| 3.5100          | 19.58                     | 3.53                   | 10.30                  | 29.88                    | 13.83                 | 56.00                   | 46.00                | -26.12                 | -32.17              | Pass   |
| 23.9500         | 29.39                     | 28.08                  | 10.31                  | 39.70                    | 38.39                 | 60.00                   | 50.00                | -20.30                 | -11.61              | Pass   |
| 26.9460         | 29.80                     | 26.46                  | 10.24                  | 40.04                    | 36.70                 | 60.00                   | 50.00                | -19.96                 | -13.30              | Pass   |

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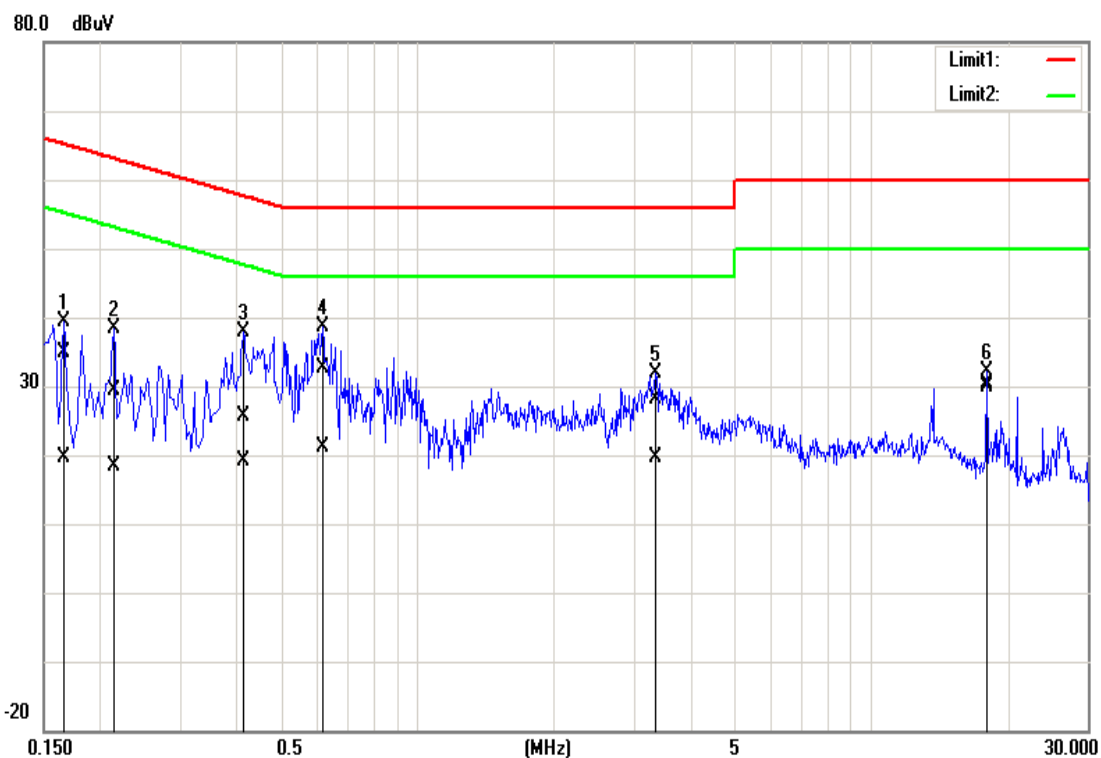
|            |         |               |                  |
|------------|---------|---------------|------------------|
| Test Mode: | Mode 3  | Temp/Hum      | 20(°C)/ 63%RH    |
| Phase:     | Neutral | Test Date     | January 05, 2021 |
|            |         | Test Engineer | Jerry Chang      |



| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.1660          | 31.93                     | 18.31                  | 10.18                  | 42.11                    | 28.49                 | 65.16                   | 55.16                | -23.05                 | -26.67              | Pass   |
| 0.1900          | 29.02                     | 19.17                  | 10.19                  | 39.21                    | 29.36                 | 64.04                   | 54.04                | -24.83                 | -24.68              | Pass   |
| 0.2140          | 24.14                     | 15.23                  | 10.19                  | 34.33                    | 25.42                 | 63.05                   | 53.05                | -28.72                 | -27.63              | Pass   |
| 0.4780          | 23.99                     | 17.50                  | 10.19                  | 34.18                    | 27.69                 | 56.37                   | 46.37                | -22.19                 | -18.68              | Pass   |
| 0.6100          | 18.54                     | 14.11                  | 10.19                  | 28.73                    | 24.30                 | 56.00                   | 46.00                | -27.27                 | -21.70              | Pass   |
| 23.9500         | 28.97                     | 27.71                  | 10.51                  | 39.48                    | 38.22                 | 60.00                   | 50.00                | -20.52                 | -11.78              | Pass   |

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|            |        |               |                |
|------------|--------|---------------|----------------|
| Test Mode: | Mode 4 | Temp/Hum      | 23(°C)/ 51%RH  |
| Phase:     | Line   | Test Date     | April 15, 2021 |
|            |        | Test Engineer | Dally Hong     |



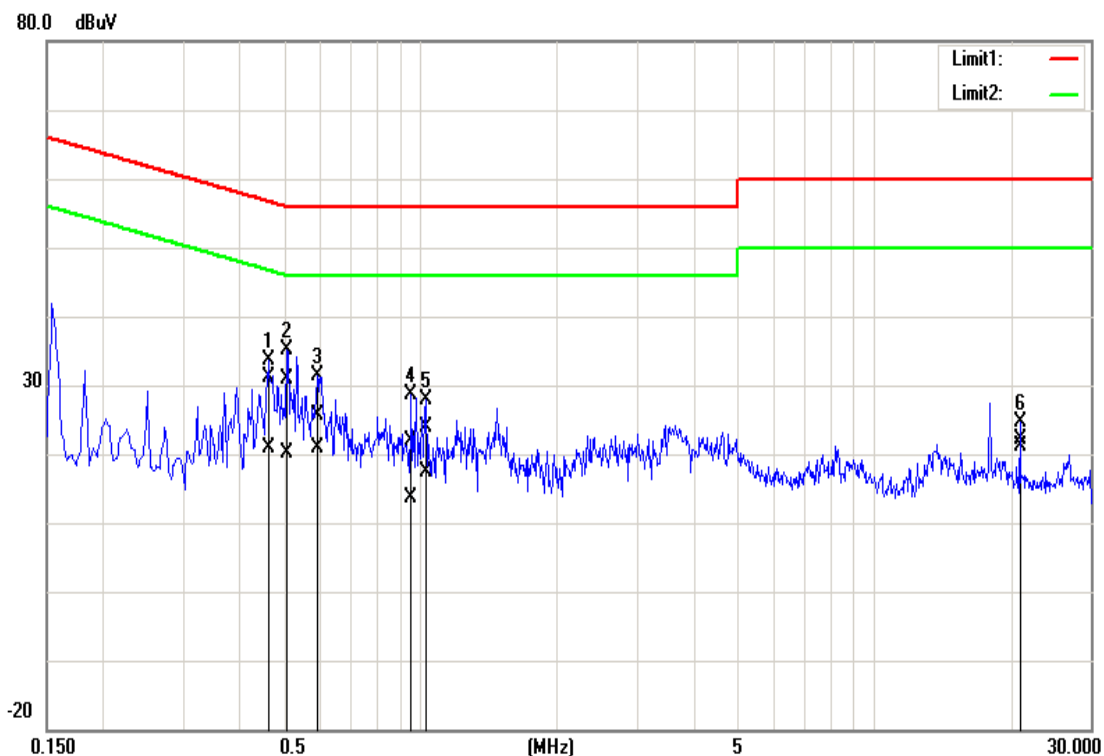
| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.1660          | 24.68                     | 9.24                   | 10.29                  | 34.97                    | 19.53                 | 65.16                   | 55.16                | -30.19                 | -35.63              | Pass   |
| 0.2140          | 19.21                     | 8.09                   | 10.29                  | 29.50                    | 18.38                 | 63.05                   | 53.05                | -33.55                 | -34.67              | Pass   |
| 0.4140          | 15.43                     | 8.96                   | 10.29                  | 25.72                    | 19.25                 | 57.57                   | 47.57                | -31.85                 | -28.32              | Pass   |
| 0.6180          | 22.23                     | 10.95                  | 10.29                  | 32.52                    | 21.24                 | 56.00                   | 46.00                | -23.48                 | -24.76              | Pass   |
| 3.3500          | 17.85                     | 9.19                   | 10.35                  | 28.20                    | 19.54                 | 56.00                   | 46.00                | -27.80                 | -26.46              | Pass   |
| 17.9620         | 19.95                     | 19.45                  | 10.44                  | 30.39                    | 29.89                 | 60.00                   | 50.00                | -29.61                 | -20.11              | Pass   |

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|            |         |               |                |
|------------|---------|---------------|----------------|
| Test Mode: | Mode 4  | Temp/Hum      | 23(°C)/ 51%RH  |
| Phase:     | Neutral | Test Date     | April 15, 2021 |
|            |         | Test Engineer | Dally Hong     |



| Frequency (MHz) | Quasi Peak reading (dBuV) | Average reading (dBuV) | Correction factor (dB) | Quasi Peak result (dBuV) | Average result (dBuV) | Quasi Peak limit (dBuV) | Average limit (dBuV) | Quasi Peak margin (dB) | Average margin (dB) | Remark |
|-----------------|---------------------------|------------------------|------------------------|--------------------------|-----------------------|-------------------------|----------------------|------------------------|---------------------|--------|
| 0.4620          | 20.86                     | 10.63                  | 10.26                  | 31.12                    | 20.89                 | 56.66                   | 46.66                | -25.54                 | -25.77              | Pass   |
| 0.5100          | 20.52                     | 9.75                   | 10.26                  | 30.78                    | 20.01                 | 56.00                   | 46.00                | -25.22                 | -25.99              | Pass   |
| 0.5940          | 15.48                     | 10.66                  | 10.26                  | 25.74                    | 20.92                 | 56.00                   | 46.00                | -30.26                 | -25.08              | Pass   |
| 0.9580          | 11.54                     | 3.41                   | 10.28                  | 21.82                    | 13.69                 | 56.00                   | 46.00                | -34.18                 | -32.31              | Pass   |
| 1.0300          | 13.51                     | 6.99                   | 10.28                  | 23.79                    | 17.27                 | 56.00                   | 46.00                | -32.21                 | -28.73              | Pass   |
| 20.9540         | 11.63                     | 10.55                  | 10.50                  | 22.13                    | 21.05                 | 60.00                   | 50.00                | -37.87                 | -28.95              | Pass   |

## 4.2 20dB BANDWIDTH AND OCCUPIED BANDWIDTH (99%)

### 4.2.1 Test Limit

According to §15.247(a) (1), RSS-247 section 5.1(a) and RSS-GEN 6.7,

**20 dB Bandwidth** : For reporting purposes only.

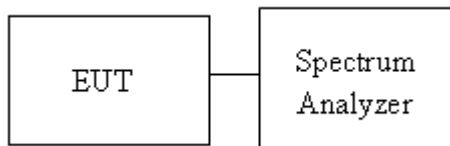
**Occupied Bandwidth(99%)** : For reporting purposes only.

### 4.2.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 7.8.7,

1. The EUT RF output connected to the spectrum analyzer by RF cable.
2. Setting maximum power transmit of EUT
3. SA set RBW = 1% ~ 5% OBW, VBW = three times the RBW and Detector = Peak, to measurement 99% Bandwidth and 20dB Bandwidth.
4. Measure and record the result of 20 dB Bandwidth and 99% Bandwidth. in the test report.

### 4.2.3 Test Setup



#### 4.2.4 Test Result

Temperature: 23.5°C

Humidity: 58.2% RH

Tested by: Rick Lee

Test date: December 15, 2020

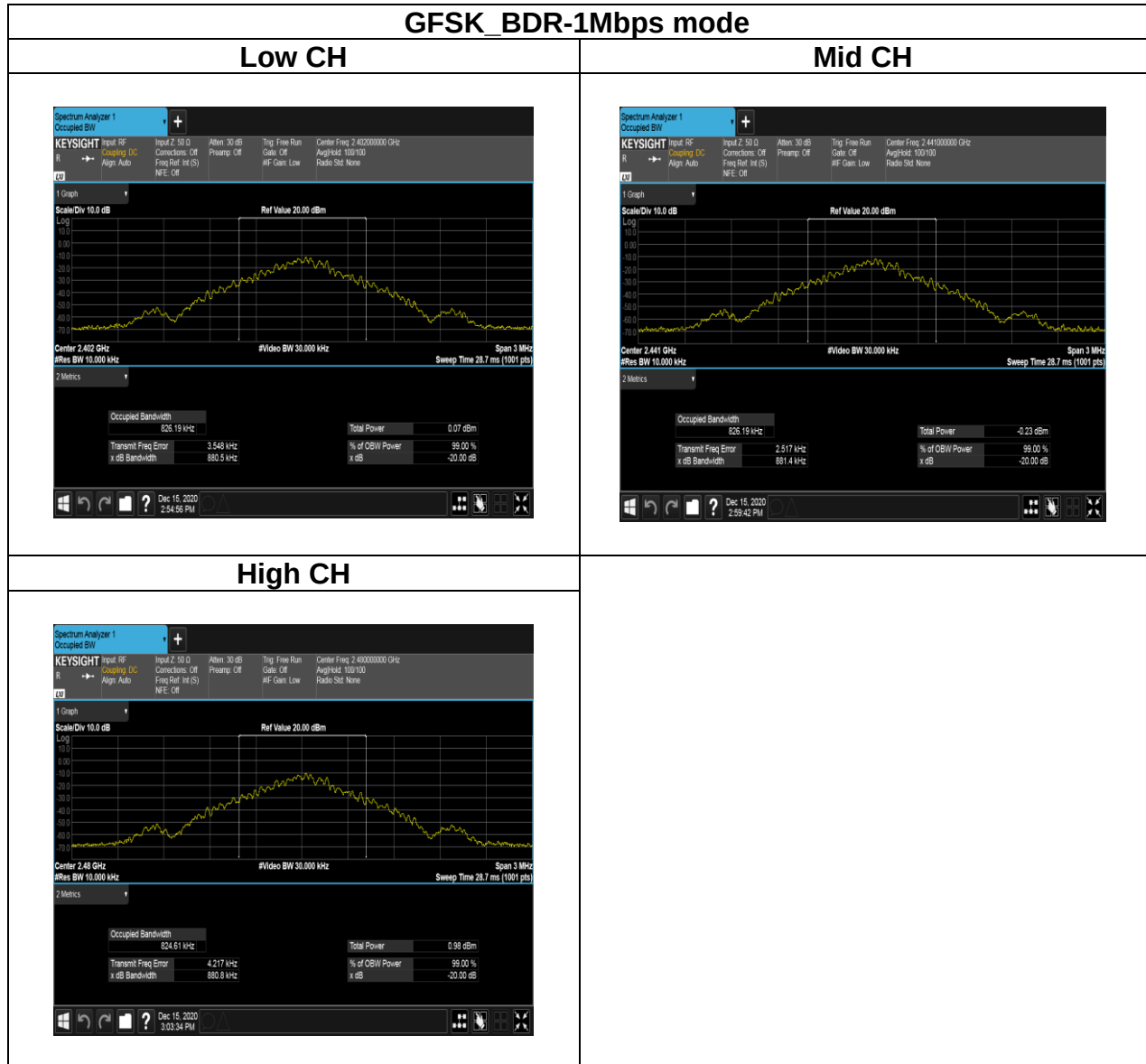
| Test mode: GFSK_BDR-1Mbps mode / 2402-2480 MHz |                 |                |               |
|------------------------------------------------|-----------------|----------------|---------------|
| Channel                                        | Frequency (MHz) | OBW(99%) (MHz) | 20dB BW (MHz) |
| Low                                            | 2402            | 0.8170         | 0.8805        |
| Mid                                            | 2441            | 0.8184         | 0.8814        |
| High                                           | 2480            | 0.8169         | 0.8808        |

| Test mode: 8DPSK_EDR-3Mbps mode / 2402-2480 MHz |                 |                |               |
|-------------------------------------------------|-----------------|----------------|---------------|
| Channel                                         | Frequency (MHz) | OBW(99%) (MHz) | 20dB BW (MHz) |
| Low                                             | 2402            | 1.1708         | 1.2530        |
| Mid                                             | 2441            | 1.1692         | 1.2520        |
| High                                            | 2480            | 1.1707         | 1.2530        |

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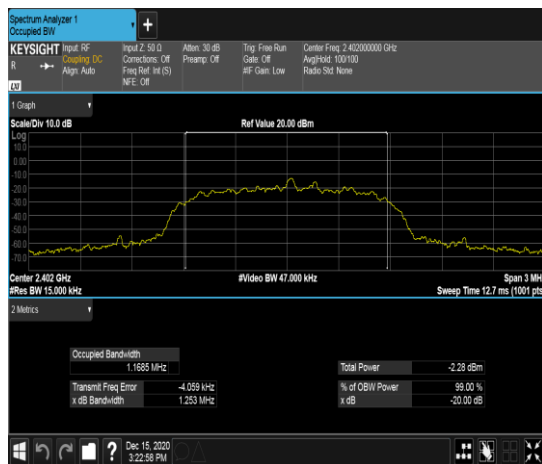
## Test Data

### 20dB BANDWIDTH

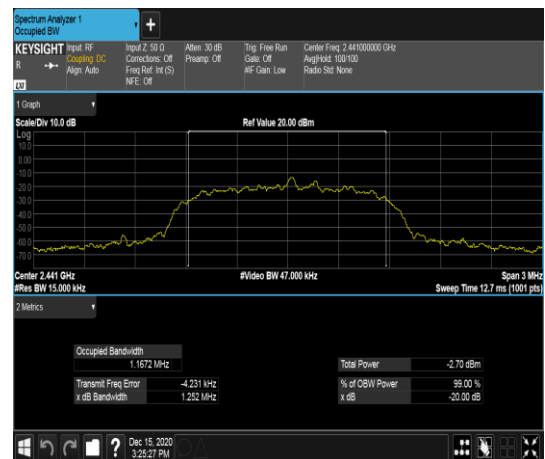


## 8DPSK\_EDR-3Mbps mode

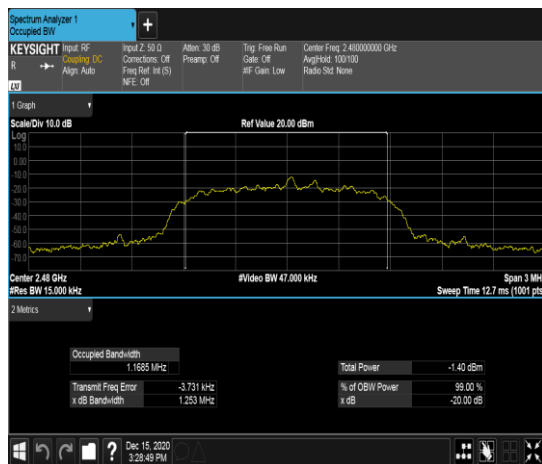
### Low CH



### Mid CH



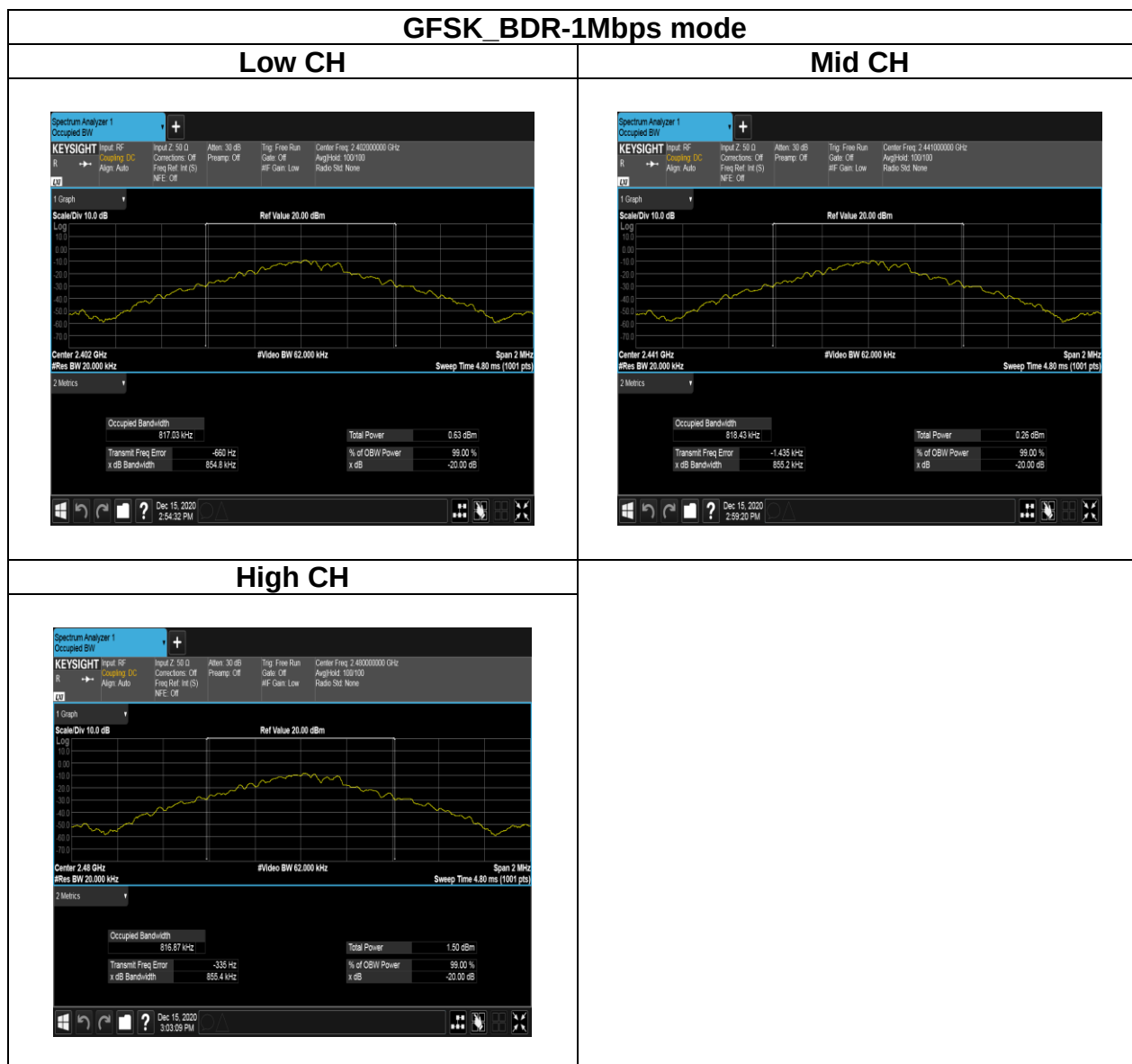
### High CH



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## Test Data

### BANDWIDTH 99%



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## 8DPSK\_EDR-3Mbps mode

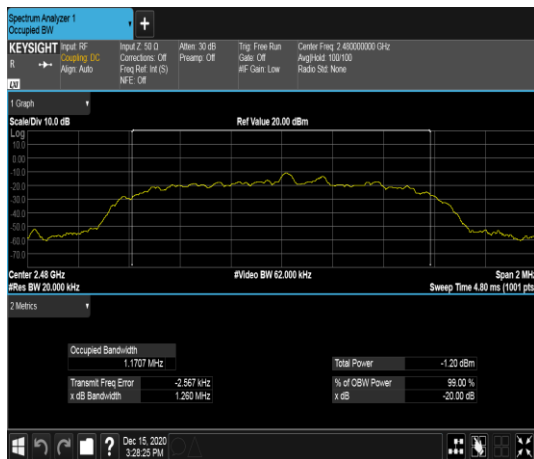
### Low CH



### Mid CH



### High CH



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## 4.3 OUTPUT POWER MEASUREMENT

### 4.3.1 Test Limit

According to §15.247(a)(1) and RSS-247 section 5.4(b)

**Peak output power** :

#### **FCC**

Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

#### **IC**

According to RSS-247 section 5.4(b), For FHSs operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channels. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

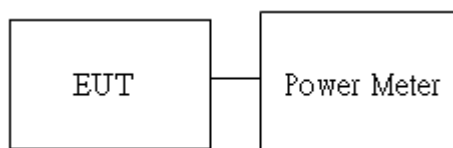
|       |                                                                                                                                                                      |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit | <input checked="" type="checkbox"/> Antenna not exceed 6 dBi : 21dBm<br><input type="checkbox"/> Antenna with DG greater than 6 dBi : 21dBm [ Limit = 30 – (DG – 6)] |
|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Average output power** : For reporting purposes only.

### 4.3.2 Test Procedure

1. The EUT RF output connected to the power meter by RF cable.
2. Setting maximum power transmit of EUT.
3. The path loss was compensated to the results for each measurement.
4. Measure and record the result of Peak output power and Average output power. in the test report.

### 4.3.3 Test Setup



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#### 4.3.4 Test Result

Temperature: 23.5°C

Humidity: 50% RH

Tested by: Rick Lee

Test date: December 30, 2020

##### Peak output power :

| BT                           |    |             |               |                |              |                     |                   |                    |                     |                    |
|------------------------------|----|-------------|---------------|----------------|--------------|---------------------|-------------------|--------------------|---------------------|--------------------|
| Config.                      | CH | Freq. (MHz) | Power Setting | PK Power (dBm) | PK Power (W) | EIRP PK Power (dBm) | EIRP PK Power (W) | FCC/IC Limit (dBm) | IC EIRP Limit (dBm) | Antenna Gain (dBi) |
| GFSK<br>BR-1Mbps<br>(DH5)    | 0  | 2402        | 8             | 4.73           | 0.0030       | 6.51                | 0.0045            | 21                 | 36                  | 1.78               |
|                              | 39 | 2441        | 8             | 4.09           | 0.0026       | 5.87                | 0.0039            |                    |                     |                    |
|                              | 78 | 2480        | 8             | 4.57           | 0.0029       | 6.35                | 0.0043            |                    |                     |                    |
| 8DPSK<br>EDR-3Mbps<br>(3DH5) | 0  | 2402        | 8             | 5.69           | 0.0037       | 7.47                | 0.0056            |                    |                     |                    |
|                              | 39 | 2441        | 8             | 5.17           | 0.0033       | 6.95                | 0.0050            |                    |                     |                    |
|                              | 78 | 2480        | 8             | 6.08           | 0.0041       | 7.86                | 0.0061            |                    |                     |                    |

##### Average output power :

| BT                           |    |             |                |
|------------------------------|----|-------------|----------------|
| Config.                      | CH | Freq. (MHz) | AV Power (dBm) |
| GFSK<br>BR-1Mbps<br>(DH5)    | 0  | 2402        | 3.96           |
|                              | 39 | 2441        | 3.44           |
|                              | 78 | 2480        | 3.11           |
| 8DPSK<br>EDR-3Mbps<br>(3DH5) | 0  | 2402        | 2.54           |
|                              | 39 | 2441        | 2.04           |
|                              | 78 | 2480        | 3.32           |

## 4.4 FREQUENCY SEPARATION

### 4.4.1 Test Limit

According to §15.247(a)(1) and RSS-247 section 5.1(b)

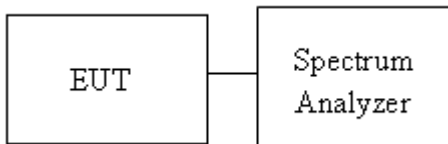
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

|       |                                     |
|-------|-------------------------------------|
| Limit | > two-thirds of the 20 dB bandwidth |
|-------|-------------------------------------|

### 4.4.2 Test Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. EUT RF output port connected to the SA by RF cable.
3. Set the spectrum analyzer as RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.  $VBW \geq RBW$ .
4. Max hold, Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

### 4.4.3 Test Setup



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#### 4.4.4 Test Result

Temperature: 23.5°C

Humidity: 58.2% RH

Tested by: Rick Lee

Test date: December 15, 2020

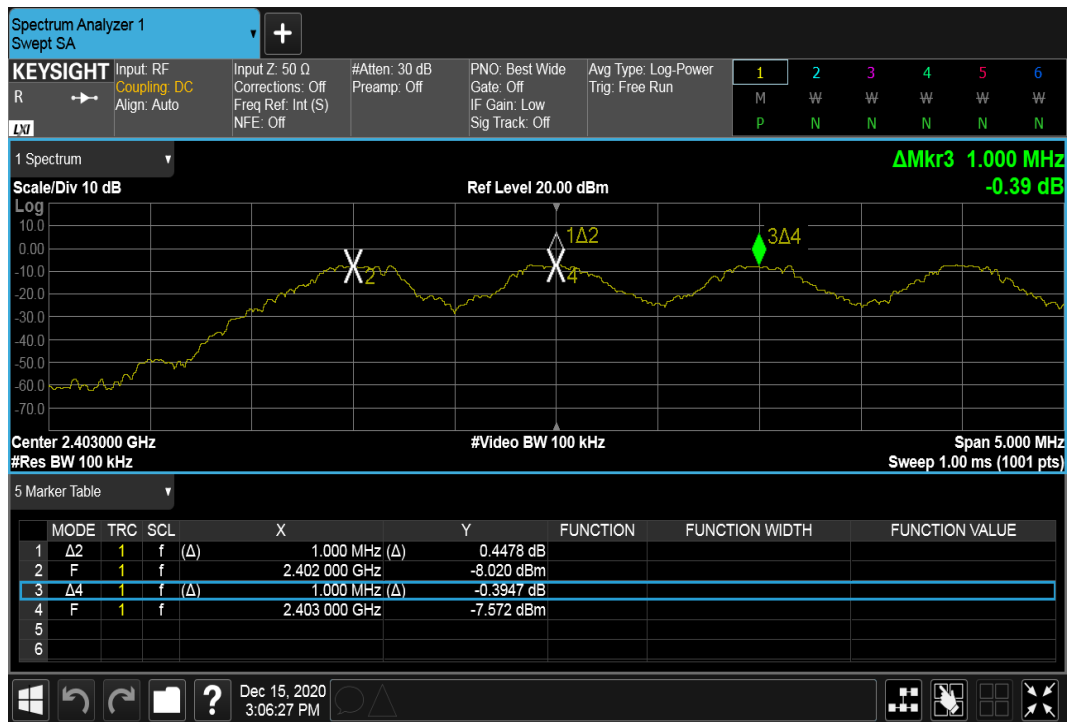
| Test mode: GFSK_BDR-1Mbps mode / 2402-2480 MHz |                 |                          |                                 |        |
|------------------------------------------------|-----------------|--------------------------|---------------------------------|--------|
| Channel                                        | Frequency (MHz) | Channel Separation (MHz) | Channel Separation Limits (MHz) | Result |
| Low                                            | 2402            | 1.0000                   | 0.587                           | PASS   |
| Mid                                            | 2441            | 1.0000                   | 0.588                           | PASS   |
| High                                           | 2480            | 1.0000                   | 0.587                           | PASS   |

| Test mode: 8DPSK_EDR-3Mbps mode / 2402-2480 MHz |                 |                          |                                 |        |
|-------------------------------------------------|-----------------|--------------------------|---------------------------------|--------|
| Channel                                         | Frequency (MHz) | Channel Separation (MHz) | Channel Separation Limits (MHz) | Result |
| Low                                             | 2402            | 1.0000                   | 0.835                           | PASS   |
| Mid                                             | 2441            | 1.0000                   | 0.835                           | PASS   |
| High                                            | 2480            | 1.0000                   | 0.835                           | PASS   |

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## Test Data

### GFSK\_BDR-1Mbps mode



### 8DPSK\_EDR-3Mbps mode



Note: We selected worst case to performed test in middle channel, The results can be meet other channel.

## 4.5 NUMBER OF HOPPING

### 4.5.1 Test Limit

According to §15.247(a)(1)(iii) and RSS-247 section 5.1(d)

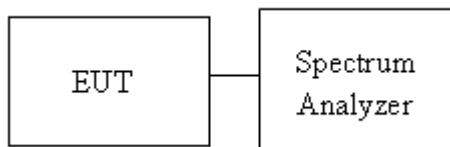
Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

### 4.5.2 Test Procedure

Test method Refer as ANSI C63.10: 2013 clause 7.8.3

1. Place the EUT on the table and set it in transmitting mode.
2. EUT RF output port connected to the SA by RF cable.
3. Set the spectrum analyzer as RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.  $VBW \geq RBW$ .
4. Max hold, Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

### 4.5.3 Test Setup



## 4.5.4 Test Result

Temperature: 23°C

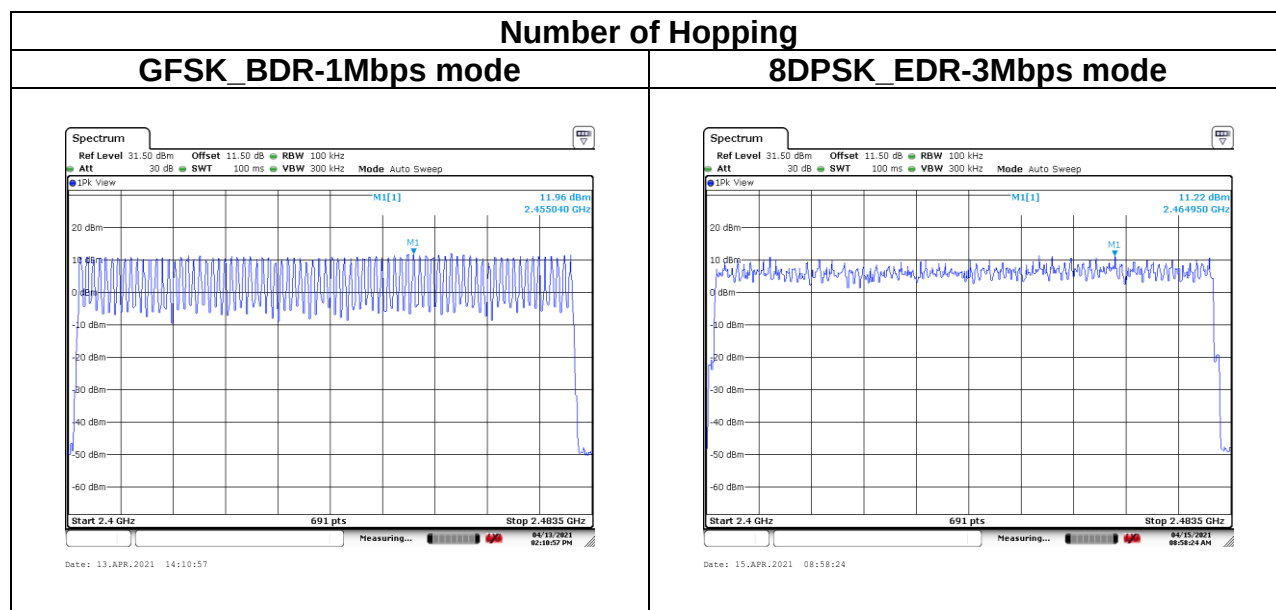
Humidity: 51% RH

Tested by: Rick Lee

Test date: April 13 ~ 15, 2021

| Number of Hopping |                 |                        |                               |        |
|-------------------|-----------------|------------------------|-------------------------------|--------|
| Mode              | Frequency (MHz) | Hopping Channel Number | Hopping Channel Number Limits | Result |
| BDR-1Mbps         | 2402-2480       | 79                     | 15                            | Pass   |
| EDR-3Mbps         | 2402-2480       | 79                     | 15                            |        |

## Test Data



## 4.6 CONDUCTED BANDEDGE AND SPURIOUS EMISSION

### 4.6.1 Test Limit

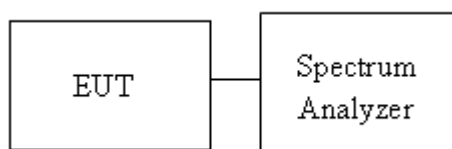
According to §15.247(d) and RSS-247 section 5.5

|       |         |
|-------|---------|
| Limit | -20 dBc |
|-------|---------|

### 4.6.2 Test Procedure

1. EUT RF output port connected to the SA by RF cable, and the path loss was compensated to result.
2. SA setting, RBW=100kHz, VBW=300kHz, Detector=Peak, Trace mode = max hold, SWT = Auto.
3. The Band Edge at 2.4GHz and 2.4835GHz are investigated with both hopping "ON" and "OFF" modes ".

### 4.6.3 Test Setup



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#### 4.6.4 Test Result

Temperature: 23.5°C

Humidity: 58.2% RH

Tested by: Rick Lee

Test date: December 15, 2020

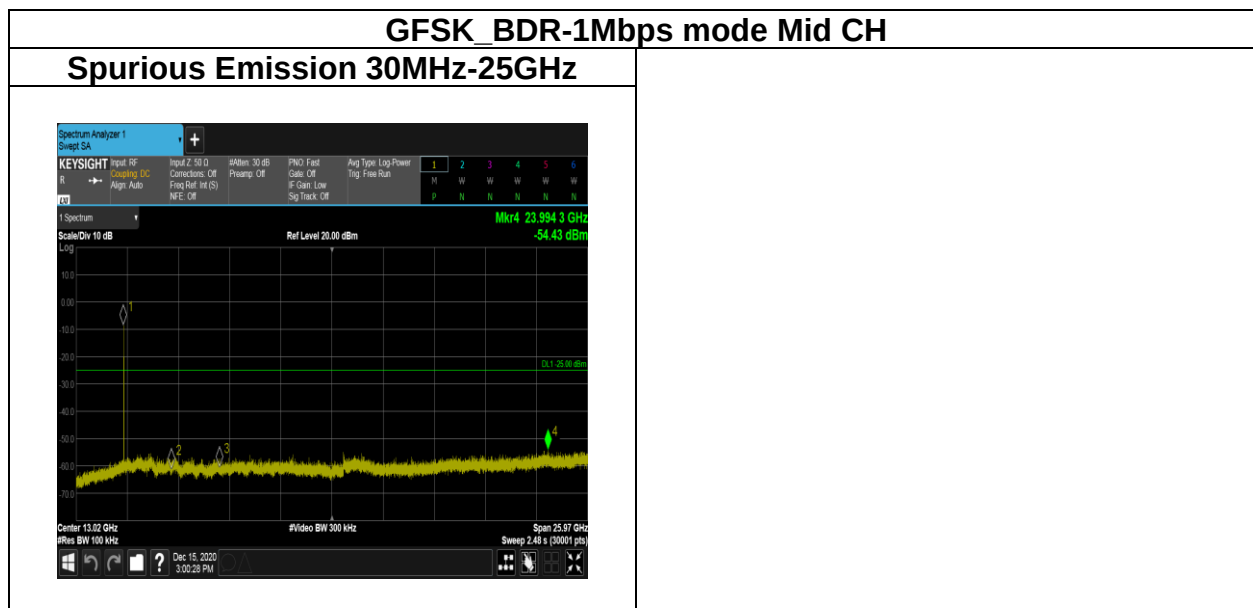
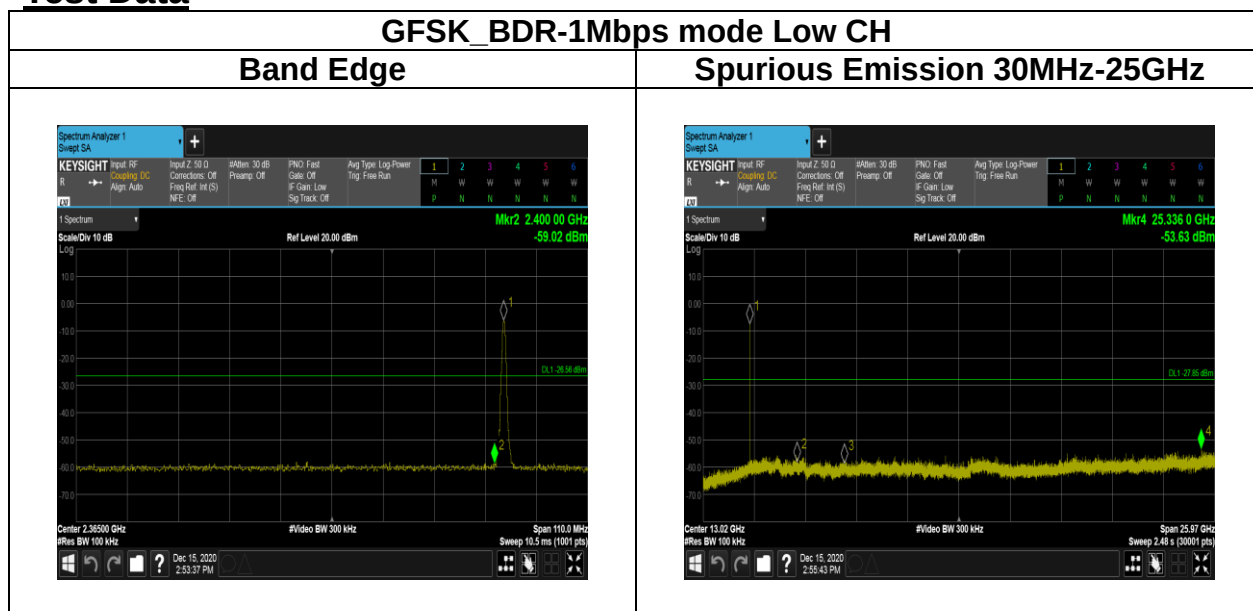
Temperature: 23°C

Humidity: 51% RH

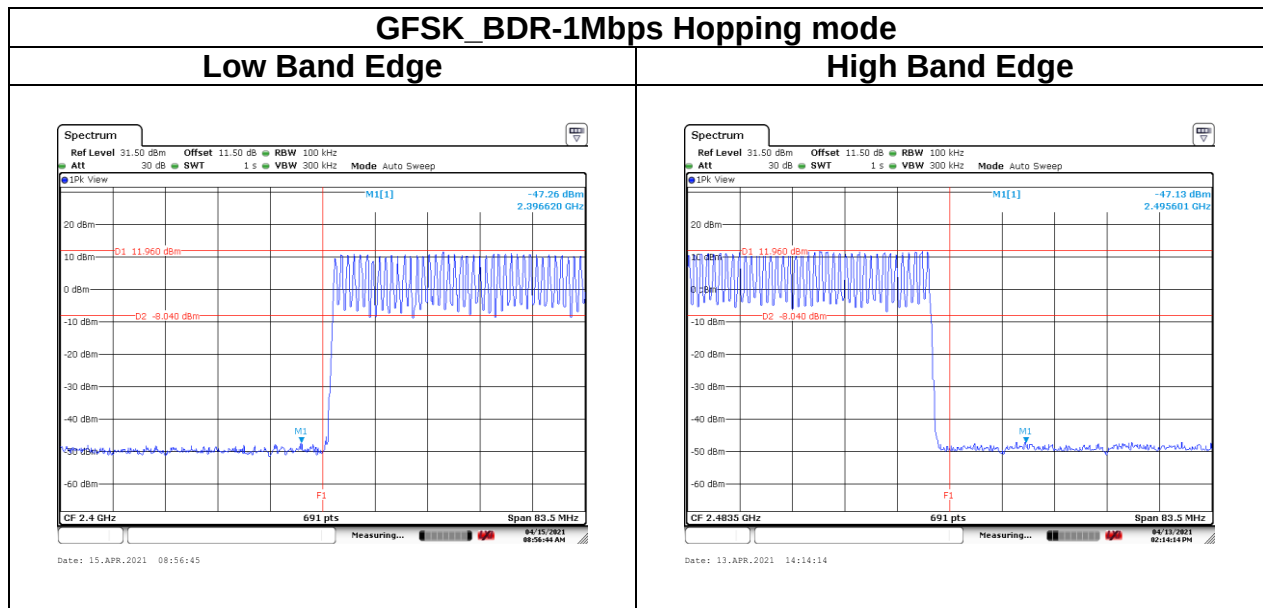
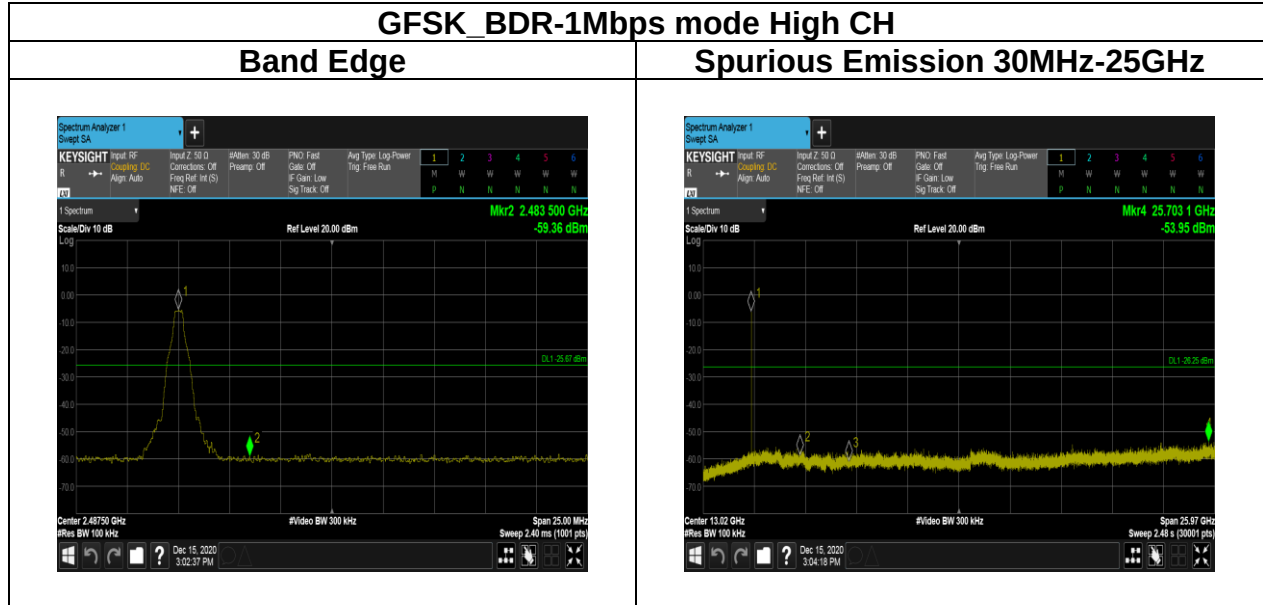
Tested by: Rick Lee

Test date: April 13 ~ 15, 2021

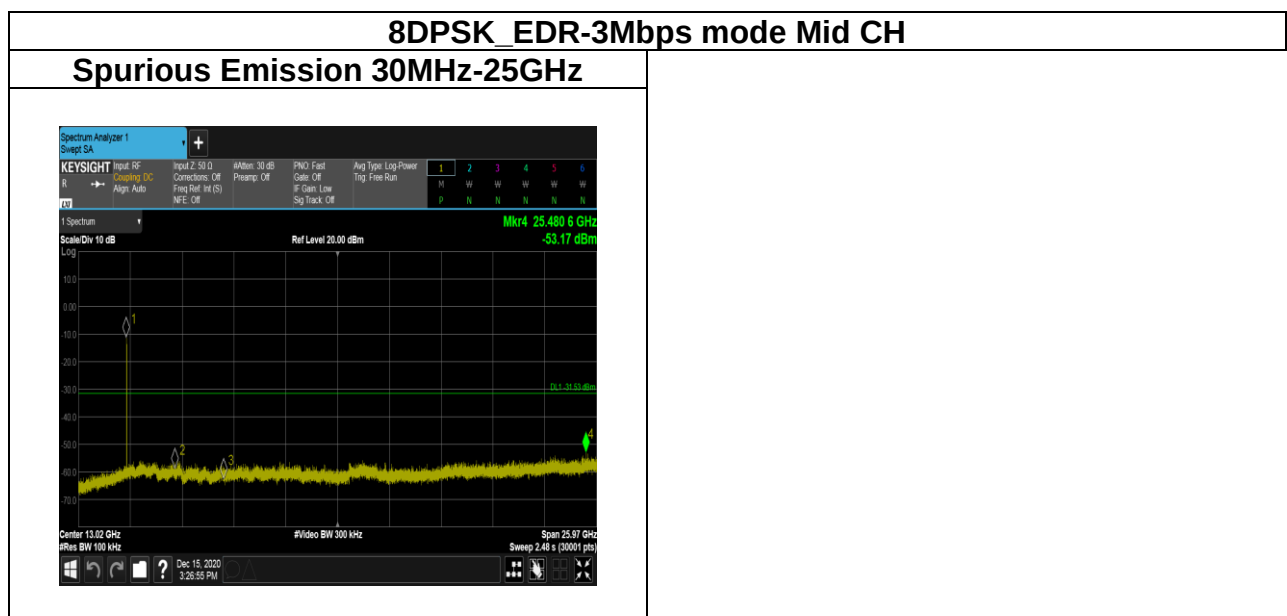
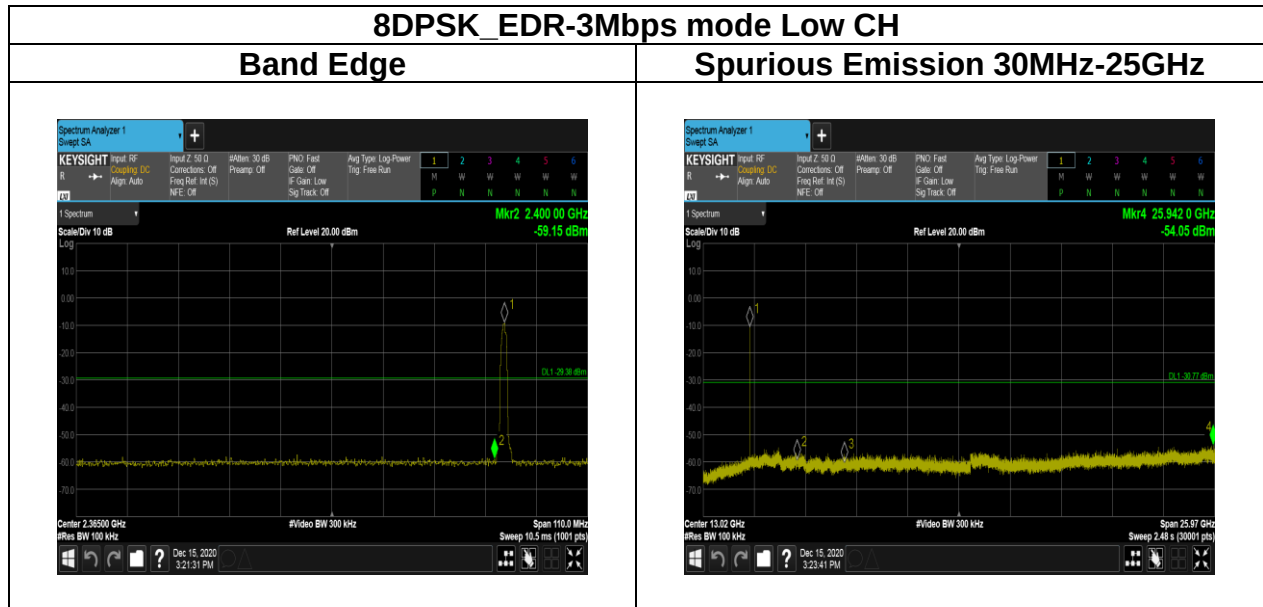
#### Test Data



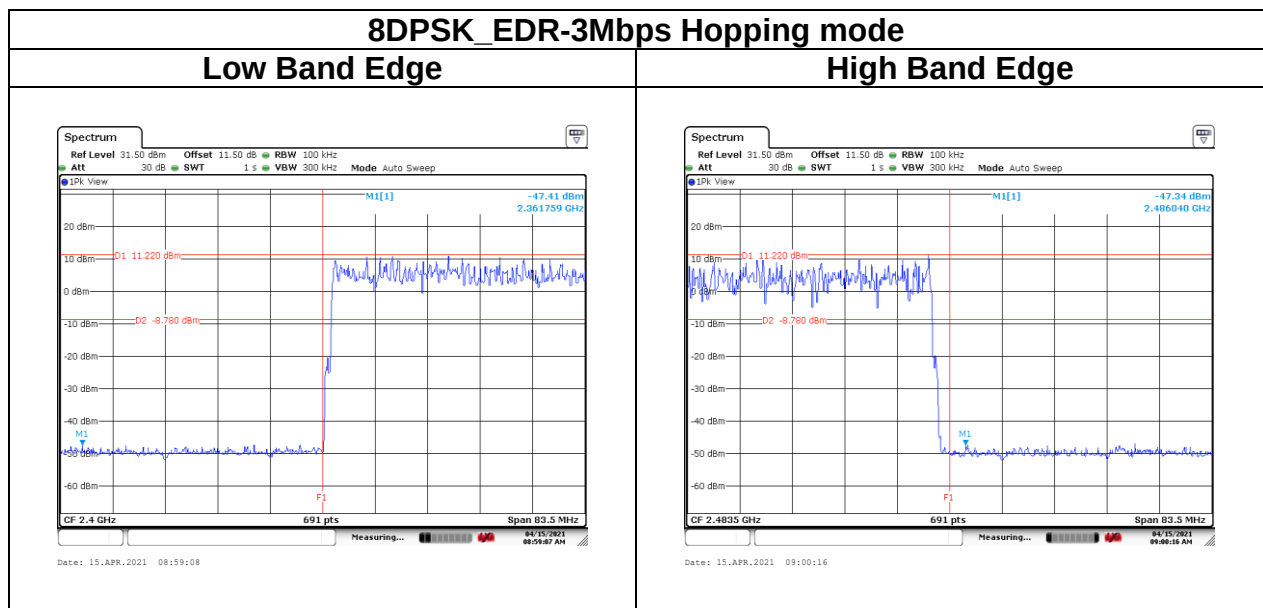
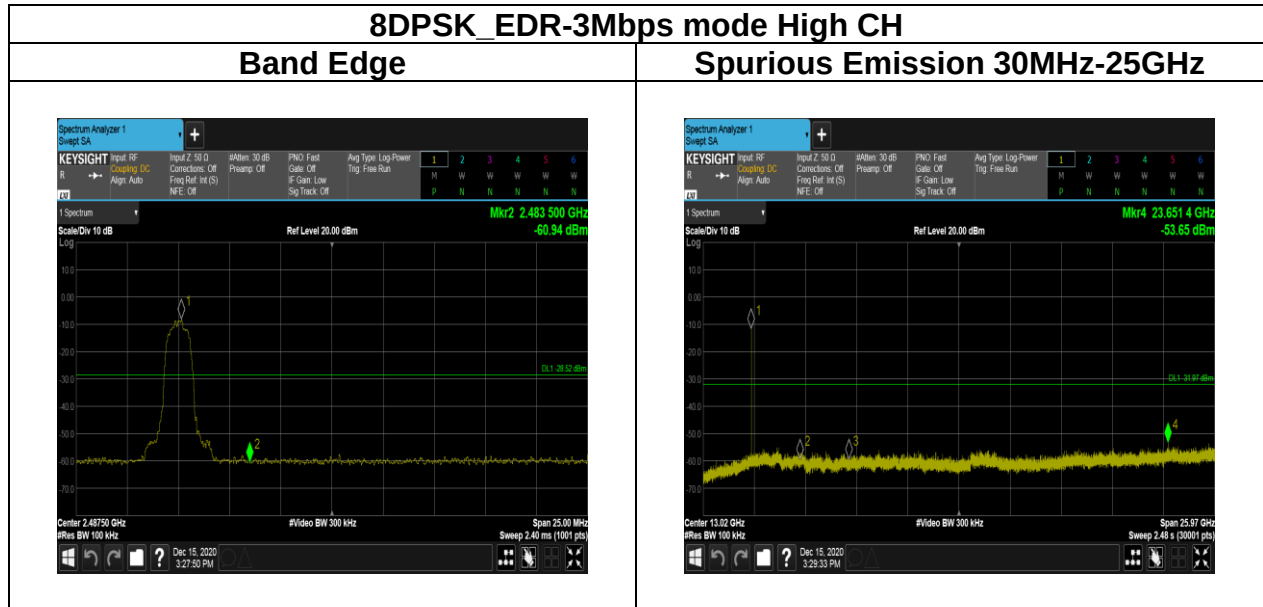
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## 4.7 TIME OF OCCUPANCY (DWELL TIME)

### 4.7.1 Test Limit

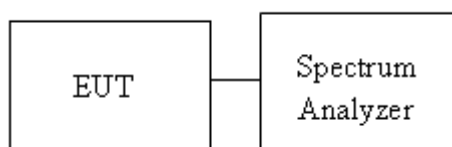
According to §15.247(a)(1)(iii) and RSS-247 section 5.1(d)

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

### 4.7.2 Test Procedure

1. EUT RF output port connected to the SA by RF cable.
2. Set center frequency of spectrum analyzer = operating frequency.
3. Set the spectrum analyzer as RBW, VBW=1MHz, Sweep = 1 ms

### 4.7.3 Test Setup



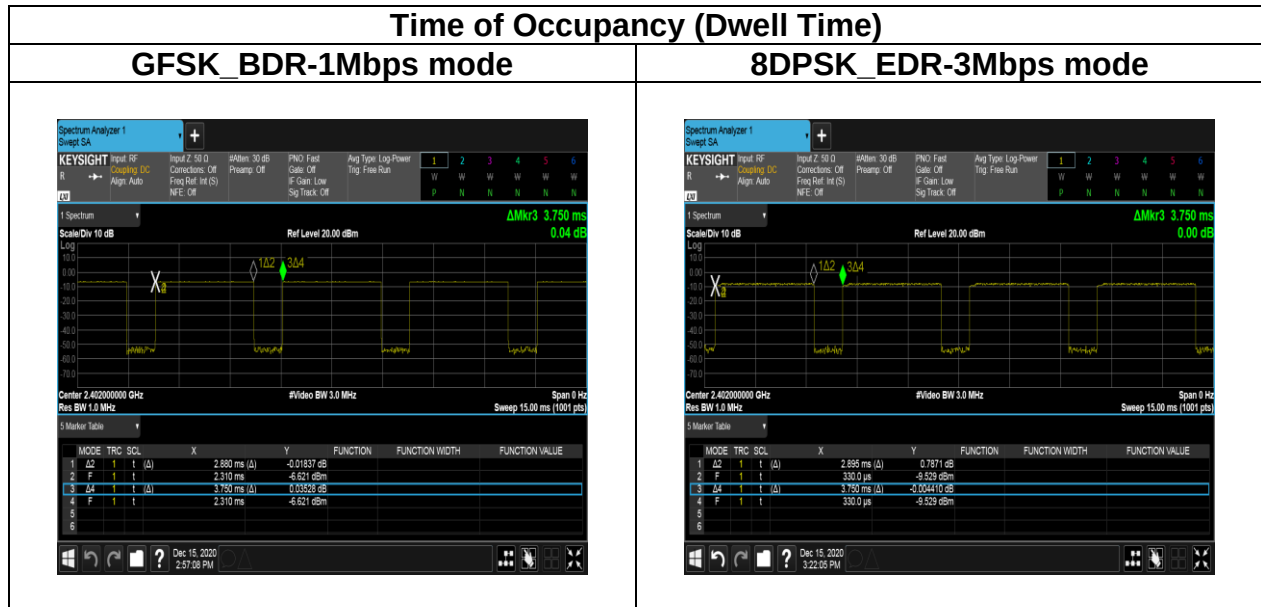
### 4.7.4 Test Result

Temperature: 23.5°C      Humidity: 58.2% RH  
Tested by: Rick Lee      Test date: December 15, 2020

| Time of Occupancy (Dwell Time)                                                                                                                                                                              |                 |                             |                                 |                    |               |                       |        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------|---------------------------------|--------------------|---------------|-----------------------|--------|
| Mode                                                                                                                                                                                                        | Frequency (MHz) | Pulse Time Per Hopping (ms) | Minimum Number of Hopping Freq. | Number of pulse in | Dwell Time IN | Dwell Time Limits (s) | Result |
|                                                                                                                                                                                                             |                 |                             |                                 | (0.4 * N sec)      | (0.4 * N sec) |                       |        |
| BDR-1Mbps                                                                                                                                                                                                   | 2441            | 2.8800                      | 79                              | 106.67             | 0.3072        | 0.4                   | Pass   |
| EDR-3Mbps                                                                                                                                                                                                   | 2441            | 2.8950                      | 79                              | 106.67             | 0.3088        | 0.4                   |        |
| Non-AFH: DH5 Packet permit maximum 1600/ 79 / 6 = 3.37 hops per second in each channel (5 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times 3.37 * 0.4 *79 = 106.6 |                 |                             |                                 |                    |               |                       |        |

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## Test Data



## 4.8 RADIATION BANDEDGE AND SPURIOUS EMISSION

### 4.8.1 Test Limit

FCC according to §15.247(d), §15.209 and §15.205,

In any 100 kHz bandwidth outside the authorized frequency band, all harmonic and spurious must be least 20 dB below the highest emission level with the authorized frequency band. Radiation emission which fall in the restricted bands must also follow the FCC section 15.209 as below limit in table.

#### Below 30 MHz

| Frequency     | Field Strength<br>(microvolts/m) | Magnetic<br>H-Field<br>(microamperes/m) | Measurement<br>Distance<br>(metres) |
|---------------|----------------------------------|-----------------------------------------|-------------------------------------|
| 9-490 kHz     | 2,400/F (F in kHz)               | 2,400/F (F in kHz)                      | 300                                 |
| 490-1,705 kHz | 24,000/F (F in kHz)              | 24,000/F (F in kHz)                     | 30                                  |
| 1.705-30 MHz  | 30                               | N/A                                     | 30                                  |

#### Above 30 MHz

| Frequency<br>(MHz) | Field Strength<br>microvolts/m at 3 metres (watts, e.i.r.p.) |              |
|--------------------|--------------------------------------------------------------|--------------|
|                    | Transmitters                                                 | Receivers    |
| 30-88              | 100 (3 nW)                                                   | 100 (3 nW)   |
| 88-216             | 150 (6.8 nW)                                                 | 150 (6.8 nW) |
| 216-960            | 200 (12 nW)                                                  | 200 (12 nW)  |
| Above 960          | 500 (75 nW)                                                  | 500 (75 nW)  |

Remark:

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30 m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

IC according to RSS-247 section 5.5, RSS-Gen, Section 8.9 and 8.10

**RSS-Gen Table 3 and Table 5 – General Field Strength Limits for Transmitters and Receivers at Frequencies Above 30 MHz** (Note)

| Frequency<br>(MHz) | Field Strength<br>microvolts/m at 3 metres (watts, e.i.r.p.) |              |
|--------------------|--------------------------------------------------------------|--------------|
|                    | Transmitters                                                 | Receivers    |
| 30-88              | 100 (3 nW)                                                   | 100 (3 nW)   |
| 88-216             | 150 (6.8 nW)                                                 | 150 (6.8 nW) |
| 216-960            | 200 (12 nW)                                                  | 200 (12 nW)  |
| Above 960          | 500 (75 nW)                                                  | 500 (75 nW)  |

**Note:** Measurements for compliance with the limits in table 3 may be performed at distances other than 3 metres, in accordance with Section 6.6.

**RSS-Gen Table 6: General Field Strength Limits for Transmitters at Frequencies Below 30 MHz (Transmit)**

| Frequency                 | Magnetic field strength<br>(H-Field) ( $\mu\text{A/m}$ ) | Measurement Distance<br>(m) |
|---------------------------|----------------------------------------------------------|-----------------------------|
| 9-490 kHz <sup>Note</sup> | 6.37/F (F in kHz)                                        | 300                         |
| 490-1,705 kHz             | 63.7/F (F in kHz)                                        | 30                          |
| 1.705-30 MHz              | 0.08                                                     | 30                          |

**Note:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

## 4.8.2 Test Procedure

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10: 2013, and the EUT set in a continuous mode.

2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.

3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 26.5GHz set to the low, Mid and High channels with the EUT transmit.

Note: No emission found between lowest internal used/generated frequency to 30MHz(9KHz~30MHz)

4. For harmonic, the worst case of output power was BDR-1Mbps. Therefore only BDR-1Mbps record in the report.

5. The SA setting following :

(1) Below 1G : RBW = 100kHz, VBW  $\geq$  3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2) Above 1G :

(2.1) For Peak measurement : RBW = 1MHz, VBW  $\geq$  3 RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.

(2.2) For Average measurement : RBW = 1MHz, VBW

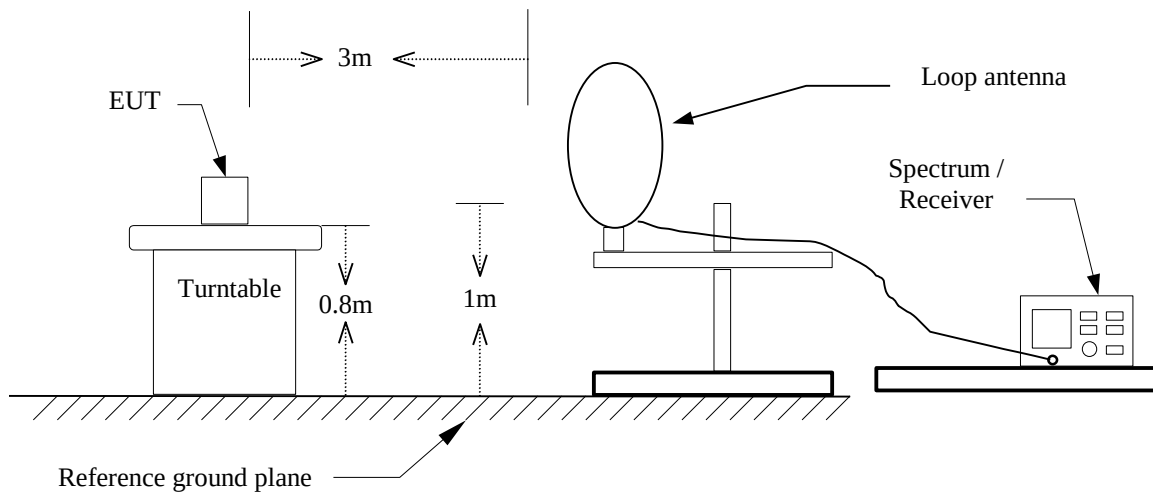
·If Duty Cycle  $\geq$  98%, VBW=10Hz.

·If Duty Cycle < 98%, VBW $\geq$ 1/T.

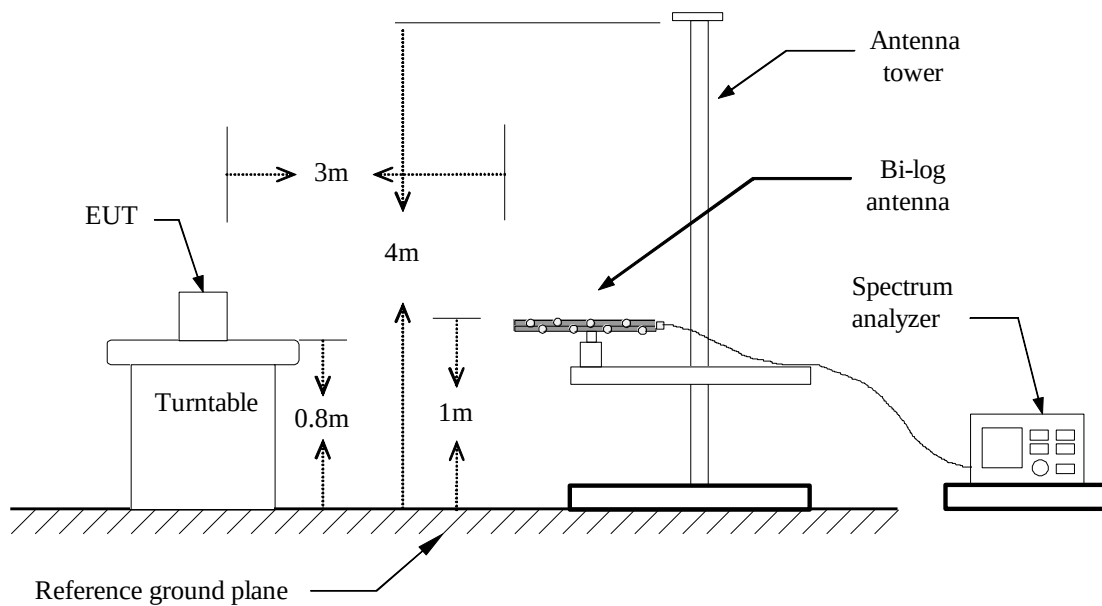
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## 4.8.3 Test Setup

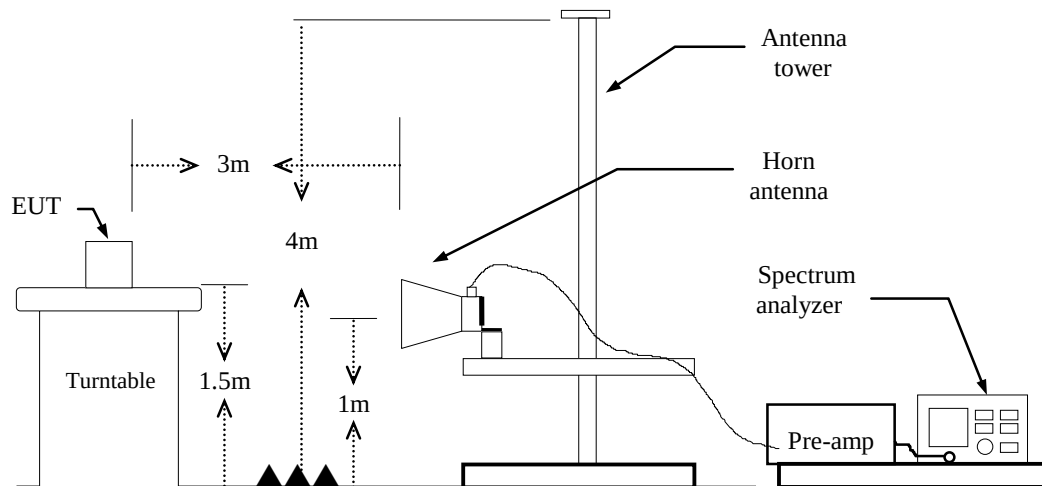
### 9kHz ~ 30MHz



### 30MHz ~ 1GHz



## Above 1 GHz

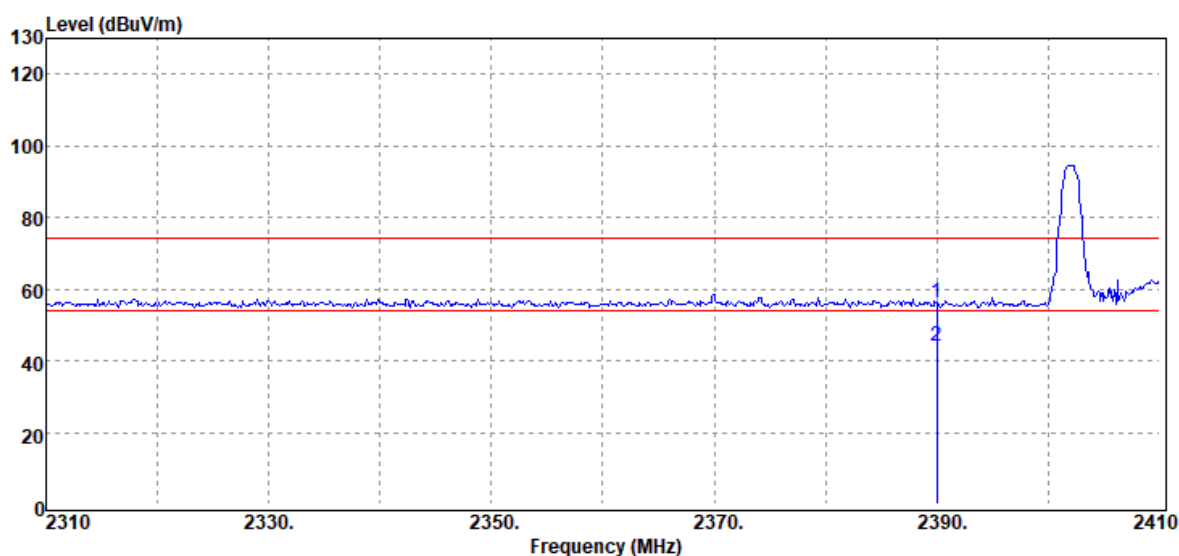


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## 4.8.4 Test Result

### Band Edge Test Data

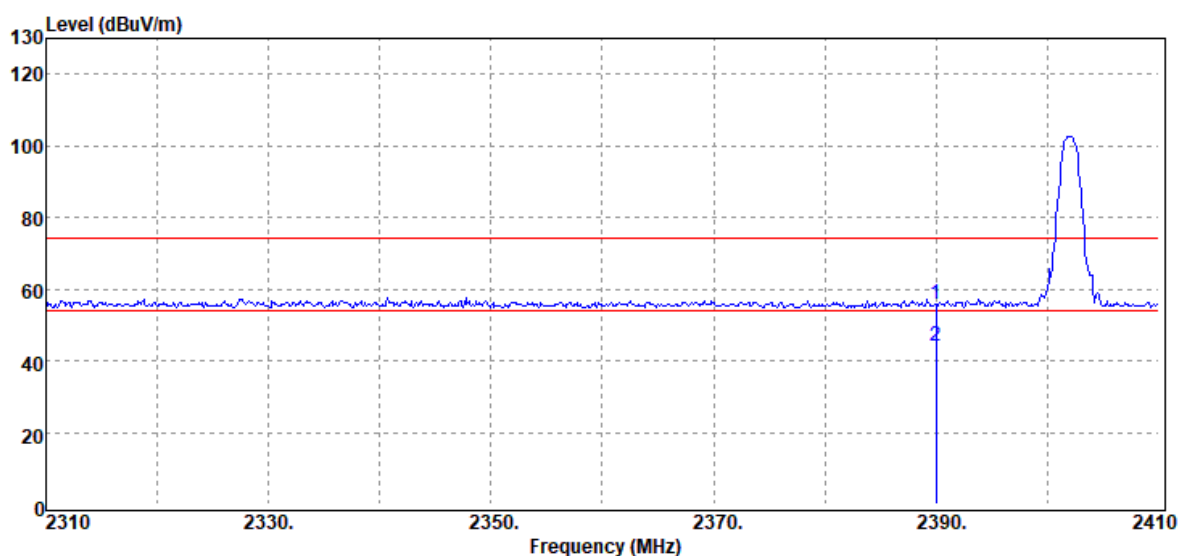
|            |                          |               |                   |
|------------|--------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>Low CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                | Test Date     | December 03, 2020 |
| Polarize   | Vertical                 | Test Engineer | Ray Li            |
| Detector   | Peak / Average           |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2390.00      | Peak                         | 73.25                             | -17.18       | 56.07                  | 74.00                  | -17.93       |
| 2390.00      | Average                      | 61.08                             | -17.18       | 43.90                  | 54.00                  | -10.10       |

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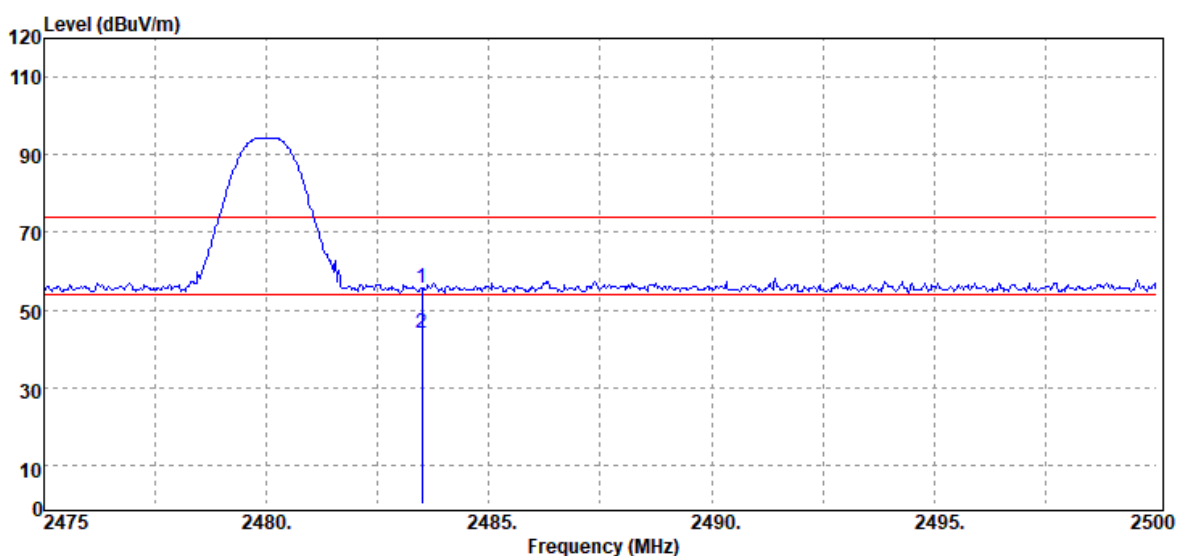
|            |                          |               |                   |
|------------|--------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>Low CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                | Test Date     | December 03, 2020 |
| Polarize   | Horizontal               | Test Engineer | Ray Li            |
| Detector   | Peak / Average           |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2390.00      | Peak                         | 72.94                             | -17.18       | 55.76                  | 74.00                  | -18.24       |
| 2390.00      | Average                      | 61.19                             | -17.18       | 44.01                  | 54.00                  | -9.99        |

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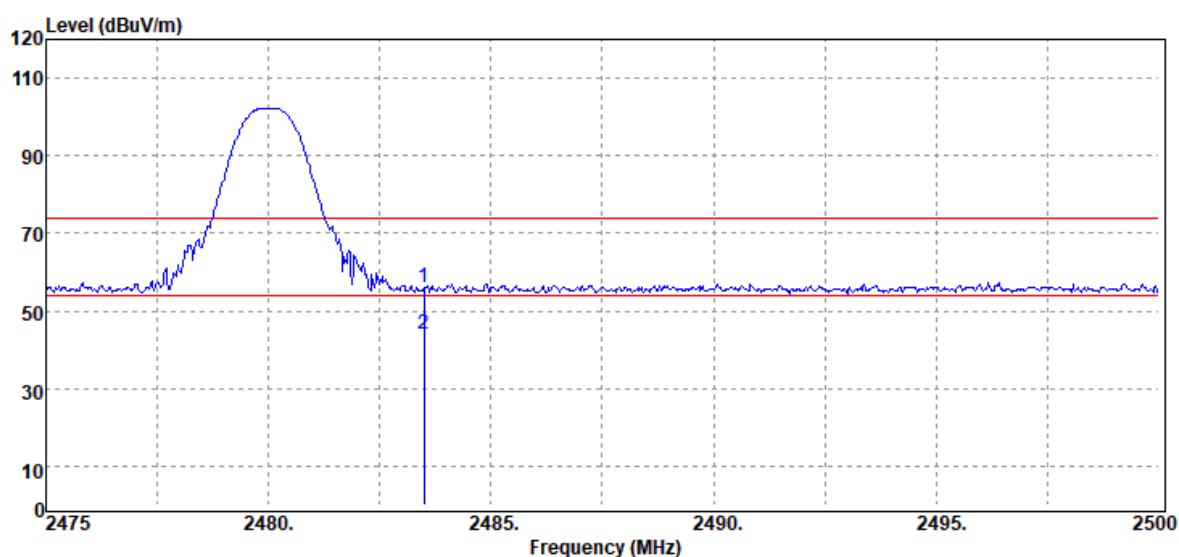
|            |                           |               |                   |
|------------|---------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>High CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                 | Test Date     | December 03, 2020 |
| Polarize   | Vertical                  | Test Engineer | Ray Li            |
| Detector   | Peak / Average            |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2483.50      | Peak                         | 72.76                             | -16.98       | 55.78                  | 74.00                  | -18.22       |
| 2483.50      | Average                      | 60.95                             | -16.98       | 43.97                  | 54.00                  | -10.03       |

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|            |                           |               |                   |
|------------|---------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>High CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                 | Test Date     | December 03, 2020 |
| Polarize   | Horizontal                | Test Engineer | Ray Li            |
| Detector   | Peak / Average            |               |                   |

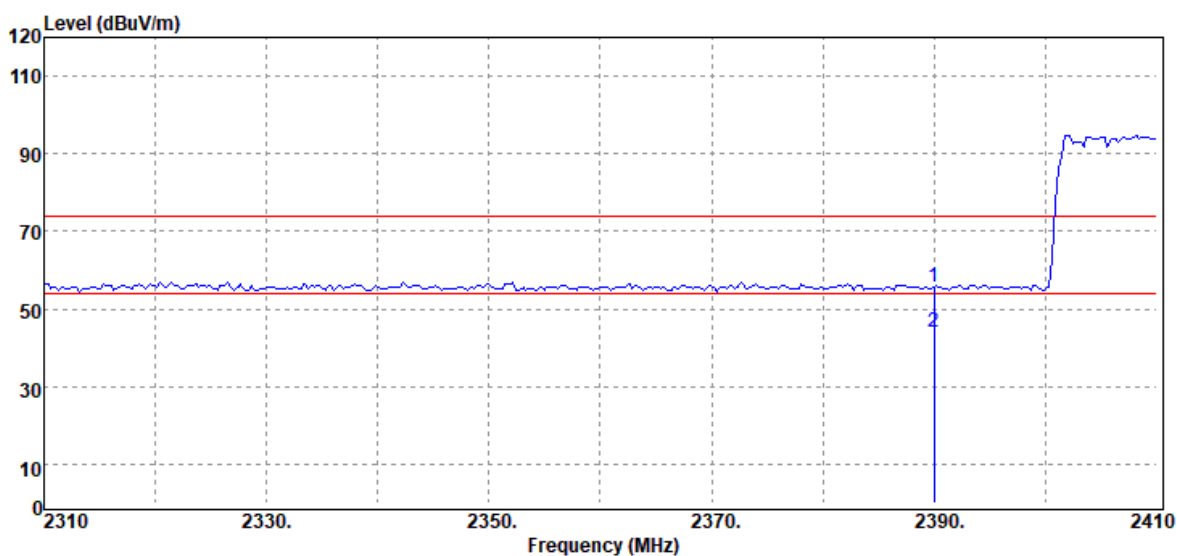


| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2483.50      | Peak                         | 72.86                             | -16.98       | 55.88                  | 74.00                  | -18.12       |
| 2483.50      | Average                      | 60.92                             | -16.98       | 43.94                  | 54.00                  | -10.06       |

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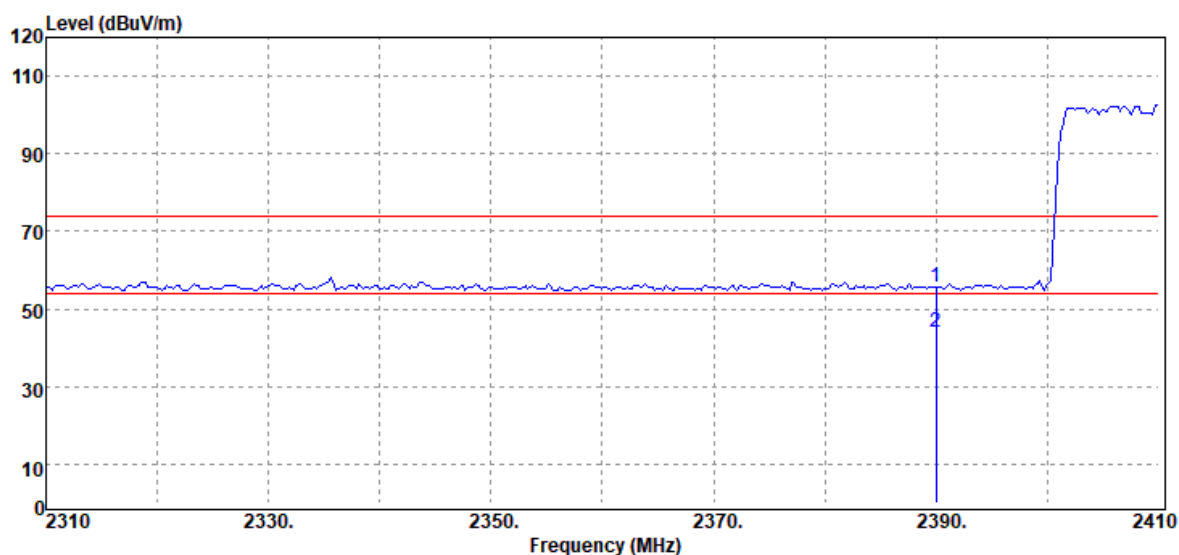
|            |                                  |               |                   |
|------------|----------------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>Low CH Hopping | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                        | Test Date     | December 03, 2020 |
| Polarize   | Vertical                         | Test Engineer | Ray Li            |
| Detector   | Peak / Average                   |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2390.00      | Peak                         | 72.94                             | -17.18       | 55.76                  | 74.00                  | -18.24       |
| 2390.00      | Average                      | 61.06                             | -17.18       | 43.88                  | 54.00                  | -10.12       |

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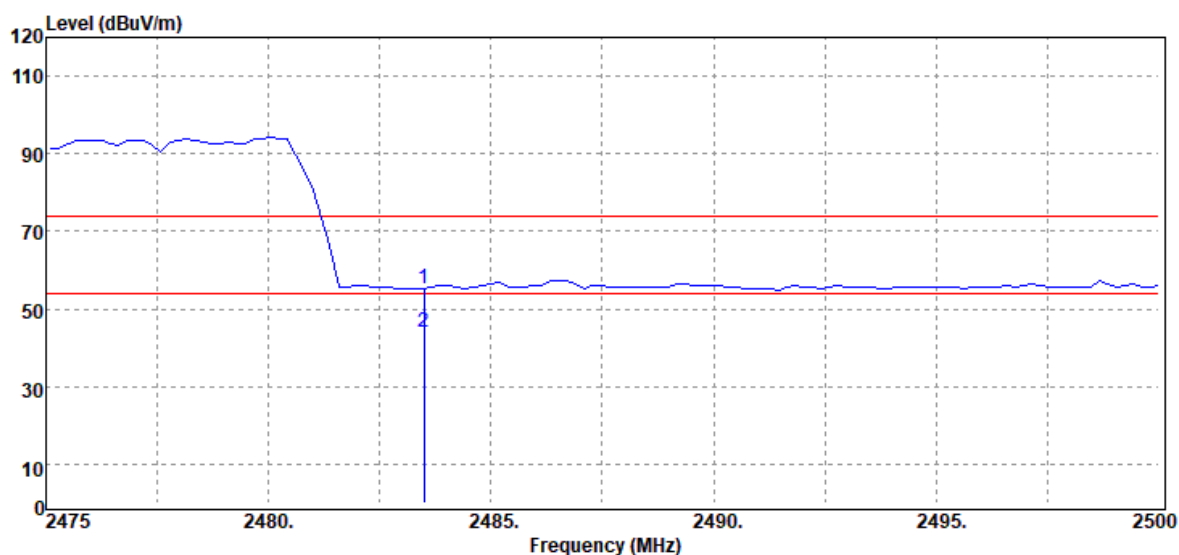
|            |                                  |               |                   |
|------------|----------------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>Low CH Hopping | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                        | Test Date     | December 03, 2020 |
| Polarize   | Horizontal                       | Test Engineer | Ray Li            |
| Detector   | Peak / Average                   |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2390.00      | Peak                         | 72.74                             | -17.18       | 55.56                  | 74.00                  | -18.44       |
| 2390.00      | Average                      | 61.16                             | -17.18       | 43.98                  | 54.00                  | -10.02       |

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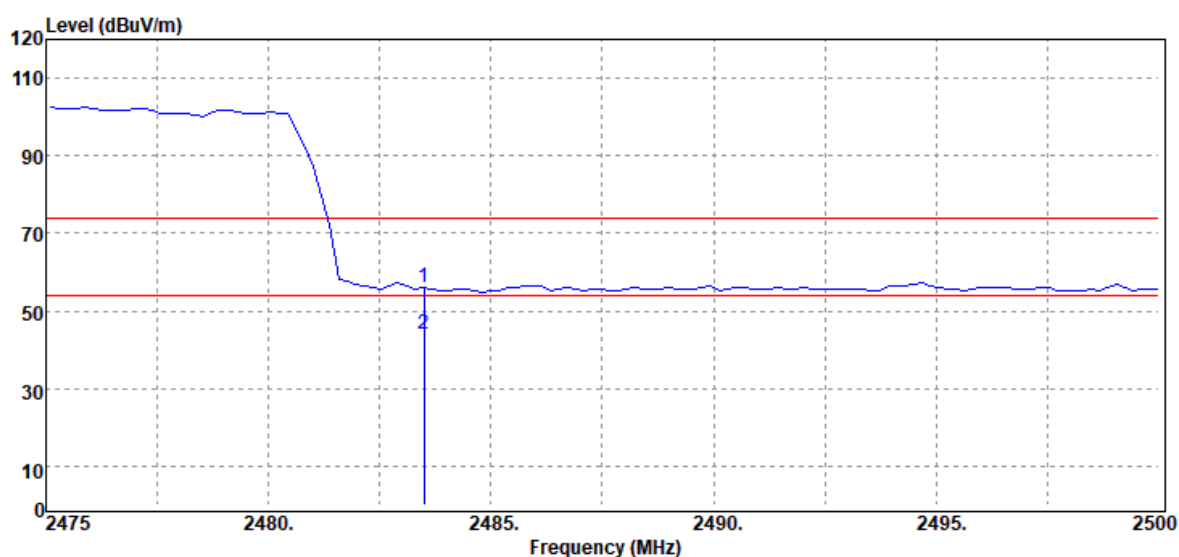
|            |                                   |               |                   |
|------------|-----------------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>High CH Hopping | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                         | Test Date     | December 03, 2020 |
| Polarize   | Vertical                          | Test Engineer | Ray Li            |
| Detector   | Peak / Average                    |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2483.50      | Peak                         | 72.37                             | -16.98       | 55.39                  | 74.00                  | -18.61       |
| 2483.50      | Average                      | 60.87                             | -16.98       | 43.89                  | 54.00                  | -10.11       |

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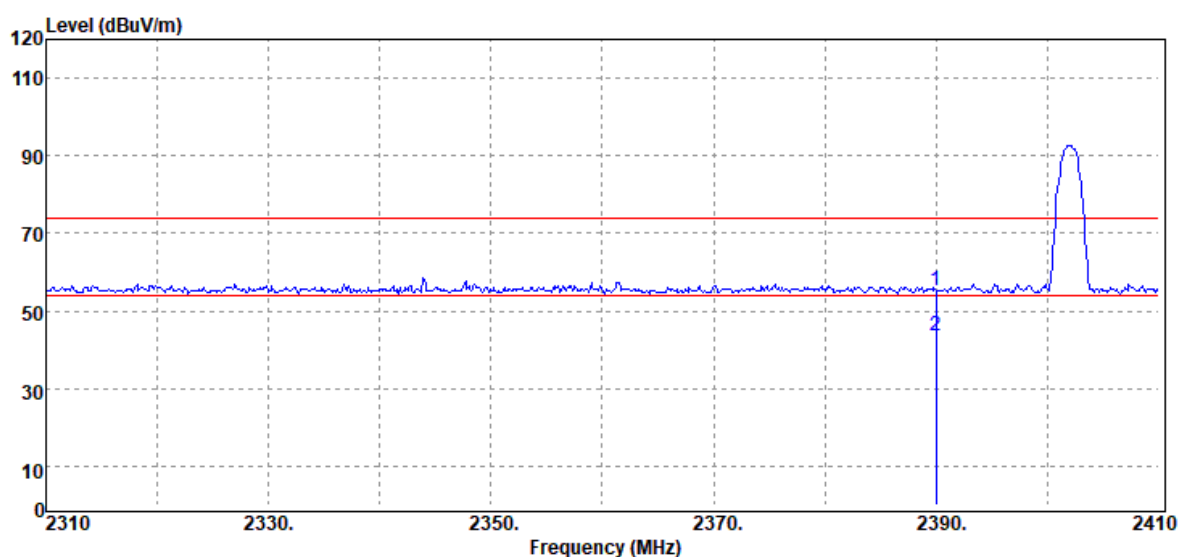
|            |                                   |               |                   |
|------------|-----------------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>High CH Hopping | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                         | Test Date     | December 03, 2020 |
| Polarize   | Horizontal                        | Test Engineer | Ray Li            |
| Detector   | Peak / Average                    |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2483.50      | Peak                         | 72.87                             | -16.98       | 55.89                  | 74.00                  | -18.11       |
| 2483.50      | Average                      | 60.94                             | -16.98       | 43.96                  | 54.00                  | -10.04       |

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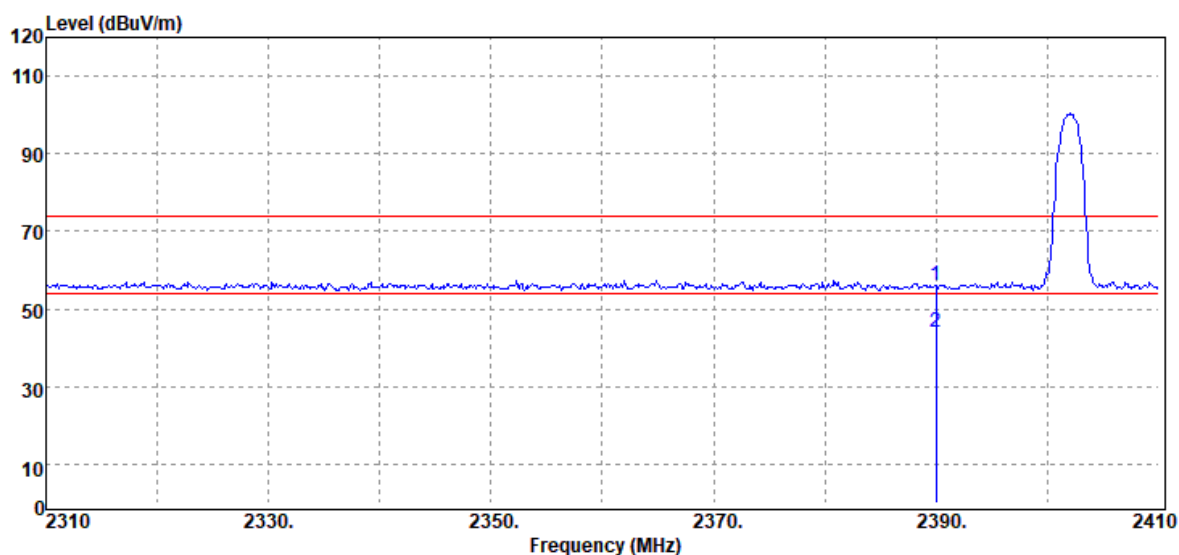
|            |                           |               |                   |
|------------|---------------------------|---------------|-------------------|
| Test Mode: | 8DPSK_EDR-3Mbps<br>Low CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                 | Test Date     | December 03, 2020 |
| Polarize   | Vertical                  | Test Engineer | Ray Li            |
| Detector   | Peak / Average            |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2390.00      | Peak                         | 72.51                             | -17.18       | 55.33                  | 74.00                  | -18.67       |
| 2390.00      | Average                      | 60.95                             | -17.18       | 43.77                  | 54.00                  | -10.23       |

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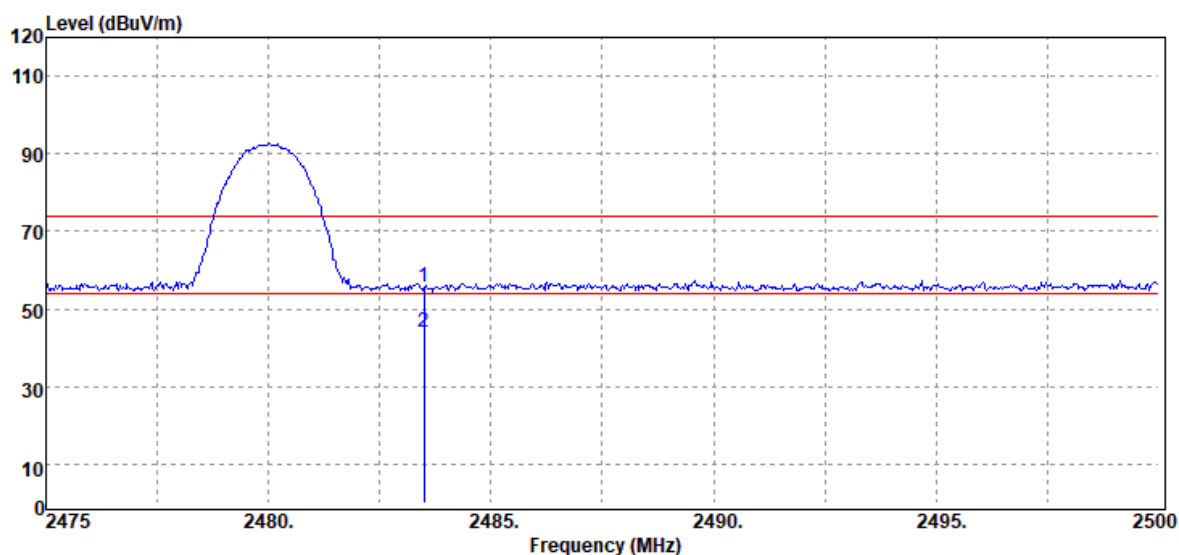
|            |                           |               |                   |
|------------|---------------------------|---------------|-------------------|
| Test Mode: | 8DPSK_EDR-3Mbps<br>Low CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                 | Test Date     | December 03, 2020 |
| Polarize   | Horizontal                | Test Engineer | Ray Li            |
| Detector   | Peak / Average            |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2390.00      | Peak                         | 73.27                             | -17.18       | 56.09                  | 74.00                  | -17.91       |
| 2390.00      | Average                      | 61.18                             | -17.18       | 44.00                  | 54.00                  | -10.00       |

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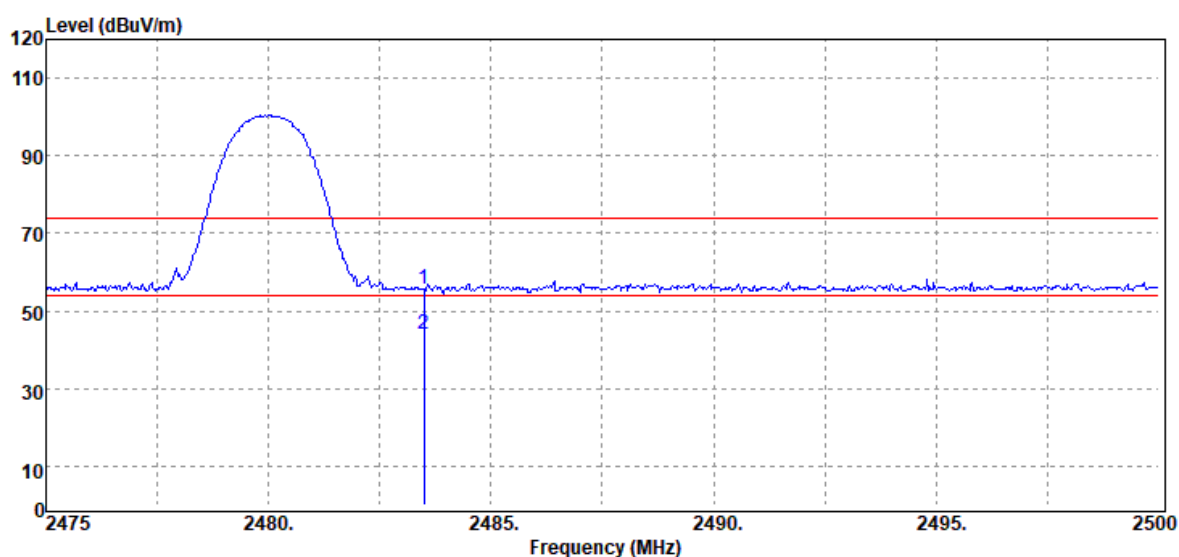
|            |                            |               |                   |
|------------|----------------------------|---------------|-------------------|
| Test Mode: | 8DPSK_EDR-3Mbps<br>High CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                  | Test Date     | December 03, 2020 |
| Polarize   | Vertical                   | Test Engineer | Ray Li            |
| Detector   | Peak / Average             |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2483.50      | Peak                         | 72.50                             | -16.98       | 55.52                  | 74.00                  | -18.48       |
| 2483.50      | Average                      | 60.92                             | -16.98       | 43.94                  | 54.00                  | -10.06       |

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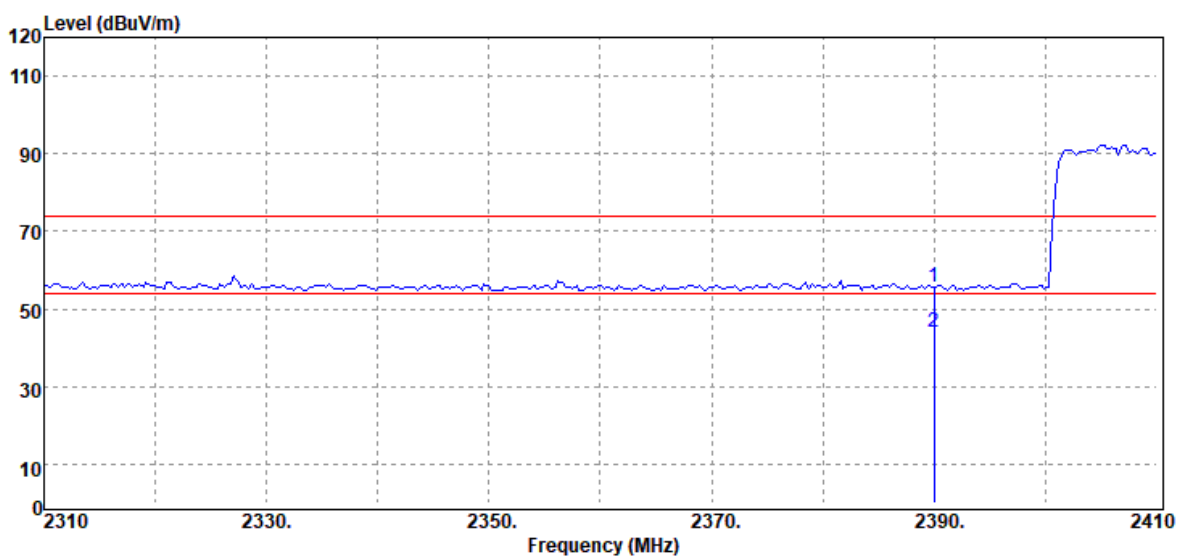
|            |                            |               |                   |
|------------|----------------------------|---------------|-------------------|
| Test Mode: | 8DPSK_EDR-3Mbps<br>High CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                  | Test Date     | December 03, 2020 |
| Polarize   | Horizontal                 | Test Engineer | Ray Li            |
| Detector   | Peak / Average             |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2483.50      | Peak                         | 72.63                             | -16.98       | 55.65                  | 74.00                  | -18.35       |
| 2483.50      | Average                      | 61.00                             | -16.98       | 44.02                  | 54.00                  | -9.98        |

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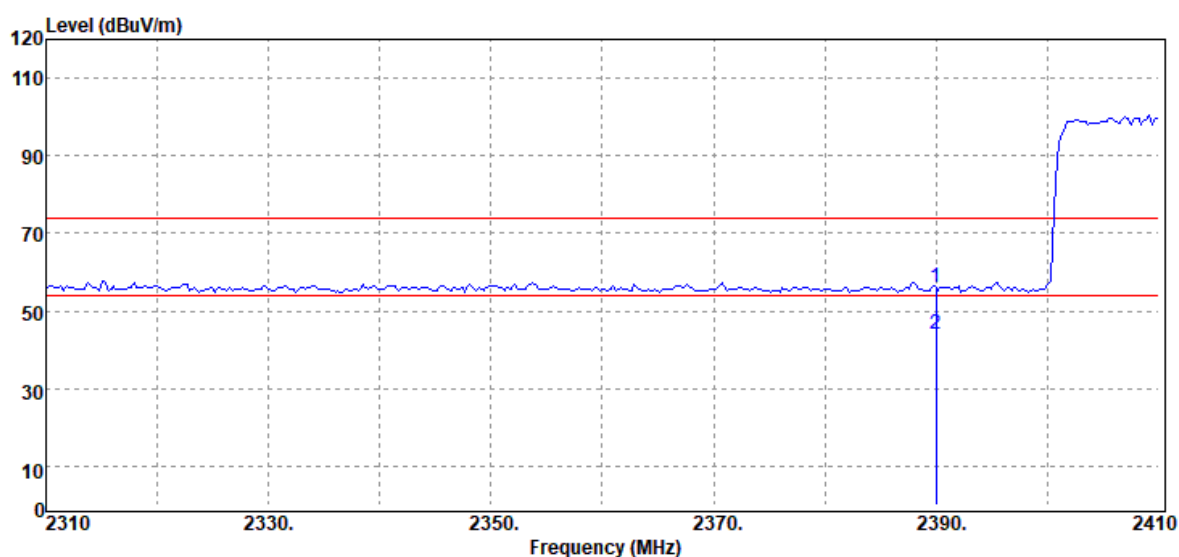
|            |                                   |               |                   |
|------------|-----------------------------------|---------------|-------------------|
| Test Mode: | 8DPSK_EDR-3Mbps<br>Low CH Hopping | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                         | Test Date     | December 03, 2020 |
| Polarize   | Vertical                          | Test Engineer | Ray Li            |
| Detector   | Peak / Average                    |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2390.00      | Peak                         | 72.76                             | -17.18       | 55.58                  | 74.00                  | -18.42       |
| 2390.00      | Average                      | 61.20                             | -17.18       | 44.02                  | 54.00                  | -9.98        |

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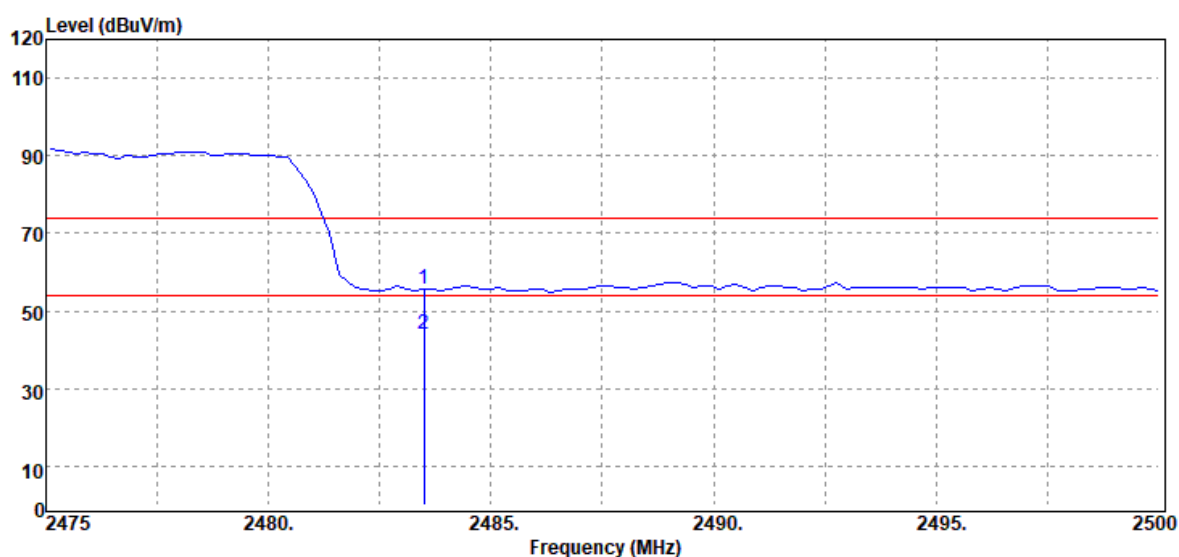
|            |                                   |               |                   |
|------------|-----------------------------------|---------------|-------------------|
| Test Mode: | 8DPSK_EDR-3Mbps<br>Low CH Hopping | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                         | Test Date     | December 03, 2020 |
| Polarize   | Horizontal                        | Test Engineer | Ray Li            |
| Detector   | Peak / Average                    |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2390.00      | Peak                         | 73.05                             | -17.18       | 55.87                  | 74.00                  | -18.13       |
| 2390.00      | Average                      | 61.24                             | -17.18       | 44.06                  | 54.00                  | -9.94        |

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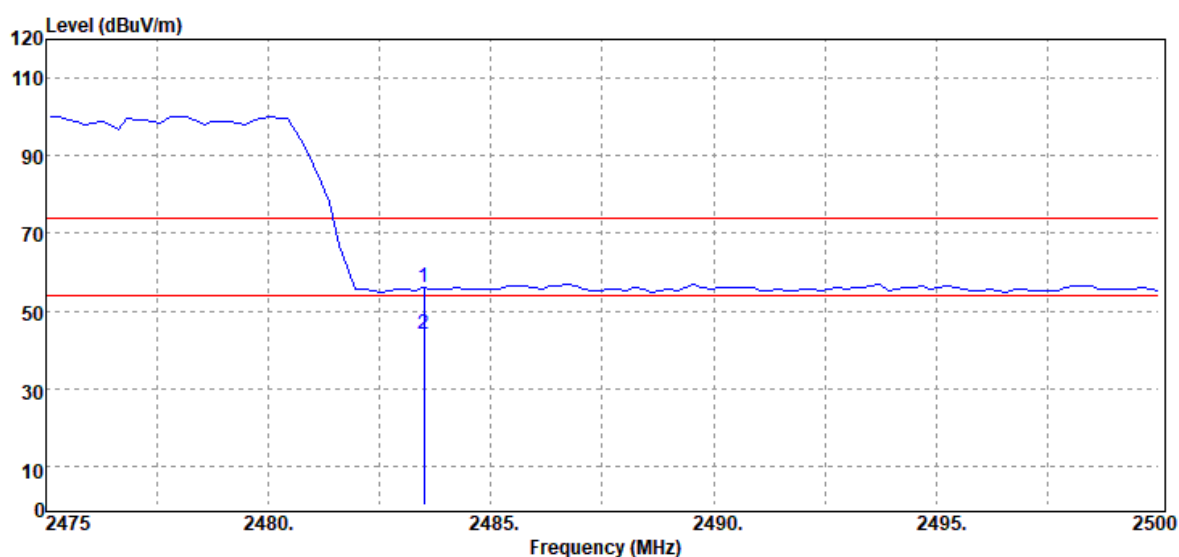
|            |                                    |               |                   |
|------------|------------------------------------|---------------|-------------------|
| Test Mode: | 8DPSK_EDR-3Mbps<br>High CH Hopping | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                          | Test Date     | December 03, 2020 |
| Polarize   | Vertical                           | Test Engineer | Ray Li            |
| Detector   | Peak / Average                     |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2483.50      | Peak                         | 72.69                             | -16.98       | 55.71                  | 74.00                  | -18.29       |
| 2483.50      | Average                      | 61.00                             | -16.98       | 44.02                  | 54.00                  | -9.98        |

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|            |                                    |               |                   |
|------------|------------------------------------|---------------|-------------------|
| Test Mode: | 8DPSK_EDR-3Mbps<br>High CH Hopping | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Band Edge                          | Test Date     | December 03, 2020 |
| Polarize   | Horizontal                         | Test Engineer | Ray Li            |
| Detector   | Peak / Average                     |               |                   |

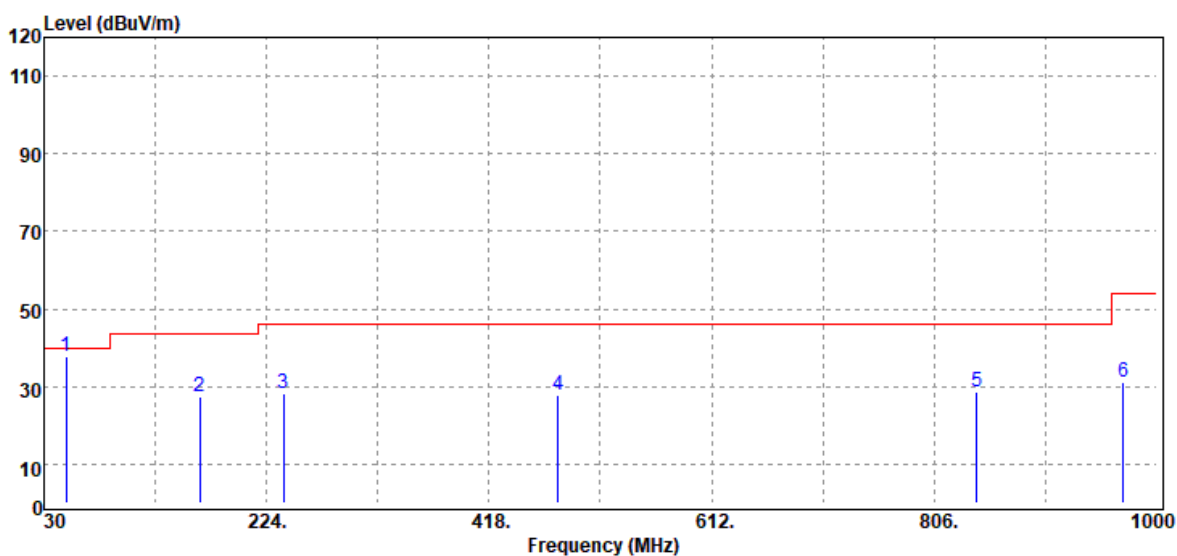


| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 2483.50      | Peak                         | 73.02                             | -16.98       | 56.04                  | 74.00                  | -17.96       |
| 2483.50      | Average                      | 60.85                             | -16.98       | 43.87                  | 54.00                  | -10.13       |

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### Below 1G Test Data

|            |            |               |                 |
|------------|------------|---------------|-----------------|
| Test Mode: | Mode 2     | Temp/Hum      | 22.1(°C)/ 51%RH |
| Test Item  | 30MHz-1GHz | Test Date     | April 22, 2021  |
| Polarize   | Vertical   | Test Engineer | Ray Li          |
| Detector   | Peak       |               |                 |



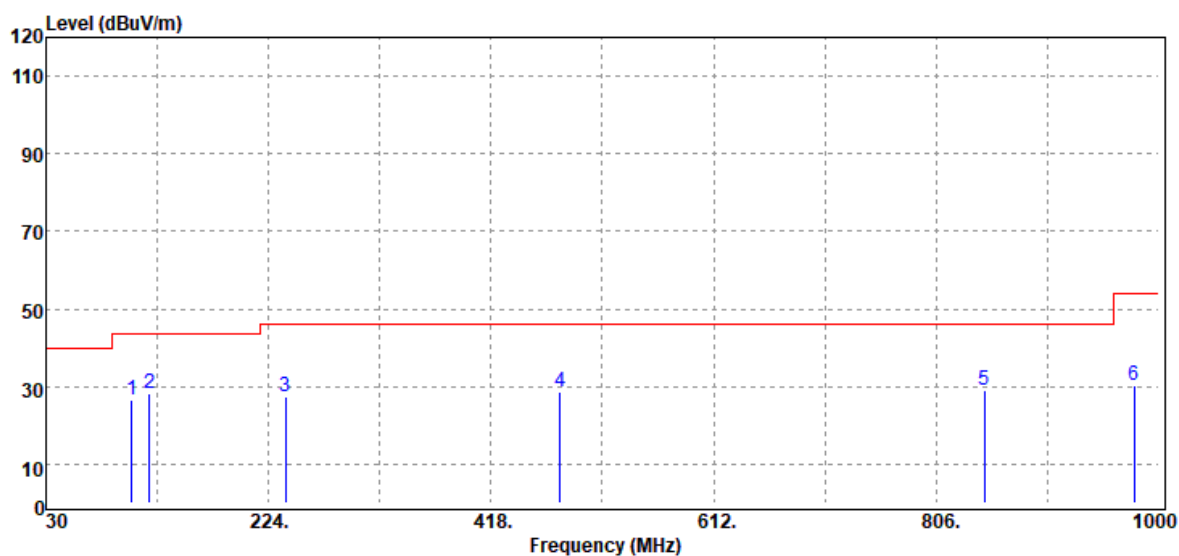
| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dB $\mu$ V | Factor<br>dB | Actual<br>FS<br>dB $\mu$ V/m | Limit<br>@3m<br>dB $\mu$ V/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------------|--------------|------------------------------|------------------------------|--------------|
| 49.40        | Peak                         | 52.51                                   | -14.88       | 37.63                        | 40.00                        | -2.37        |
| 165.80       | Peak                         | 37.80                                   | -10.24       | 27.56                        | 43.50                        | -15.94       |
| 238.55       | Peak                         | 38.46                                   | -10.35       | 28.11                        | 46.00                        | -17.89       |
| 478.14       | Peak                         | 30.60                                   | -2.90        | 27.70                        | 46.00                        | -18.30       |
| 842.86       | Peak                         | 25.34                                   | 3.31         | 28.65                        | 46.00                        | -17.35       |
| 970.90       | Peak                         | 25.54                                   | 5.43         | 30.97                        | 54.00                        | -23.03       |

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|            |            |               |                 |
|------------|------------|---------------|-----------------|
| Test Mode: | Mode 2     | Temp/Hum      | 22.1(°C)/ 51%RH |
| Test Item  | 30MHz-1GHz | Test Date     | April 22, 2021  |
| Polarize   | Horizontal | Test Engineer | Ray Li          |
| Detector   | Peak       |               |                 |

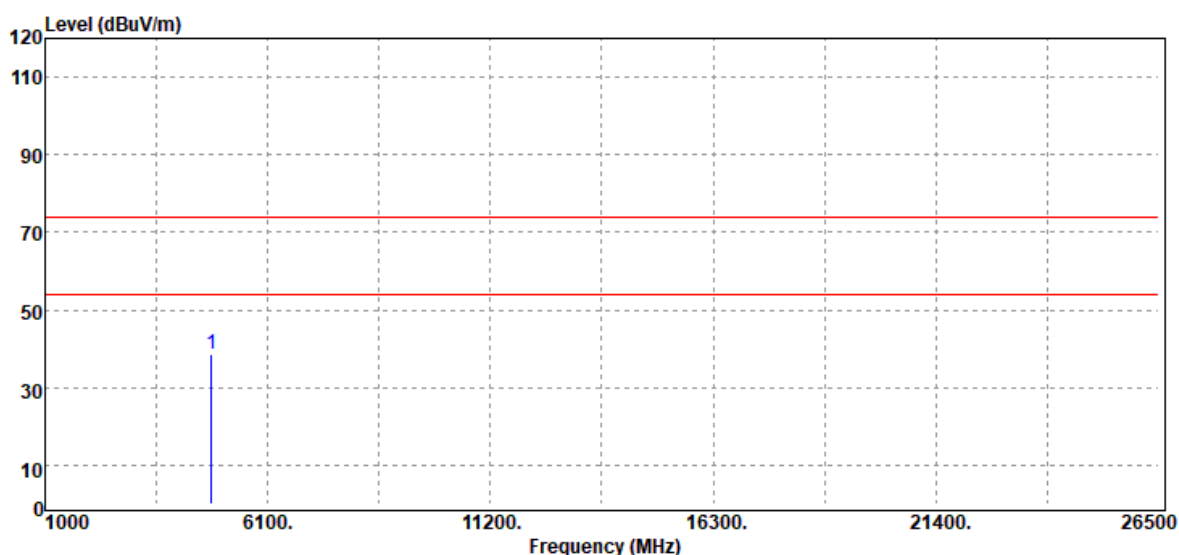


| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 104.69       | Peak                         | 37.70                             | -11.05       | 26.65                  | 43.50                  | -16.85       |
| 120.21       | Peak                         | 37.32                             | -8.98        | 28.34                  | 43.50                  | -15.16       |
| 238.55       | Peak                         | 37.68                             | -10.35       | 27.33                  | 46.00                  | -18.67       |
| 478.14       | Peak                         | 31.66                             | -2.90        | 28.76                  | 46.00                  | -17.24       |
| 847.71       | Peak                         | 25.86                             | 3.25         | 29.11                  | 46.00                  | -16.89       |
| 978.66       | Peak                         | 24.85                             | 5.58         | 30.43                  | 54.00                  | -23.57       |

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### Above 1G Test Data

|            |                          |               |                   |
|------------|--------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>Low CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Harmonic                 | Test Date     | December 03, 2020 |
| Polarize   | Vertical                 | Test Engineer | Ray Li            |
| Detector   | Peak                     |               |                   |



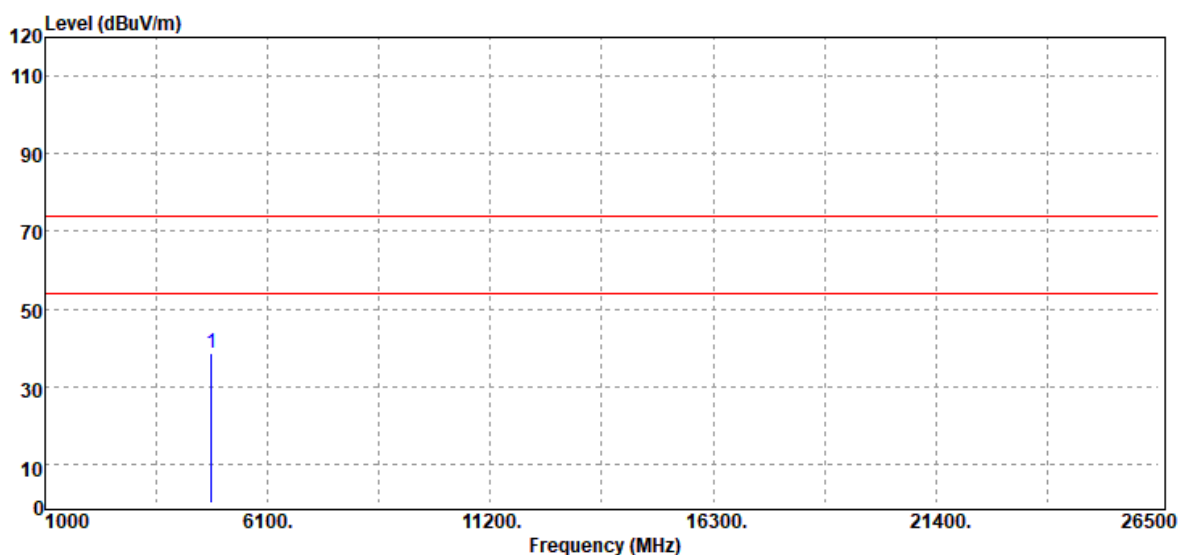
| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4804.00      | Peak                         | 50.10                             | -11.45       | 38.65                  | 74.00                  | -35.35       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

### Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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|            |                          |               |                   |
|------------|--------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>Low CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Harmonic                 | Test Date     | December 03, 2020 |
| Polarize   | Horizontal               | Test Engineer | Ray Li            |
| Detector   | Peak                     |               |                   |



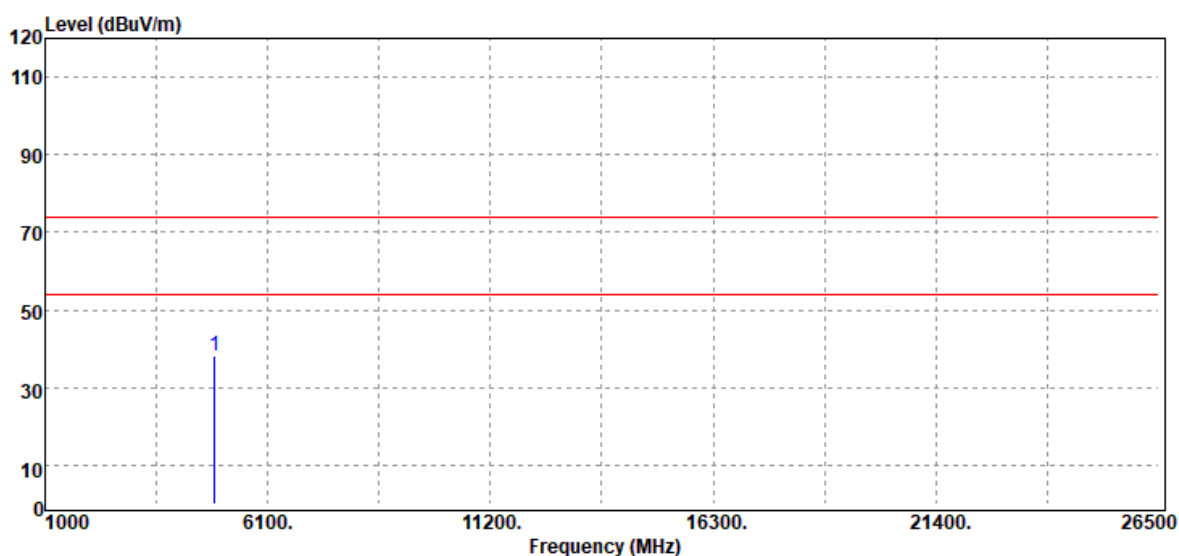
| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4804.00      | Peak                         | 50.23                             | -11.45       | 38.78                  | 74.00                  | -35.22       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200522D10-RP1

|            |                          |               |                   |
|------------|--------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>Mid CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Harmonic                 | Test Date     | December 03, 2020 |
| Polarize   | Vertical                 | Test Engineer | Ray Li            |
| Detector   | Peak                     |               |                   |



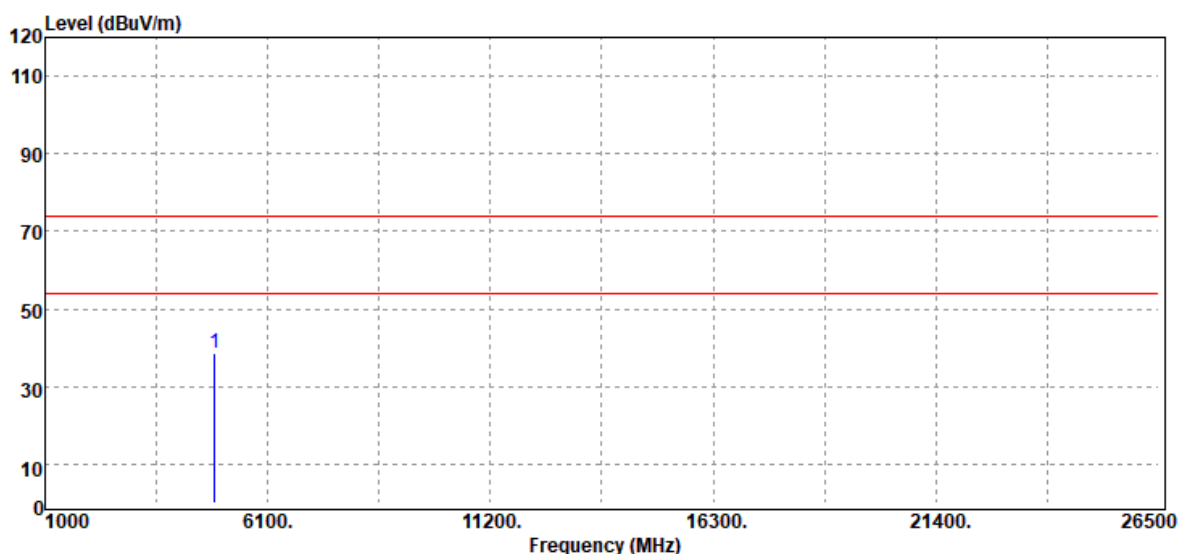
| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4882.00      | Peak                         | 49.23                             | -11.05       | 38.18                  | 74.00                  | -35.82       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

#### Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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|            |                          |               |                   |
|------------|--------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>Mid CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Harmonic                 | Test Date     | December 03, 2020 |
| Polarize   | Horizontal               | Test Engineer | Ray Li            |
| Detector   | Peak                     |               |                   |



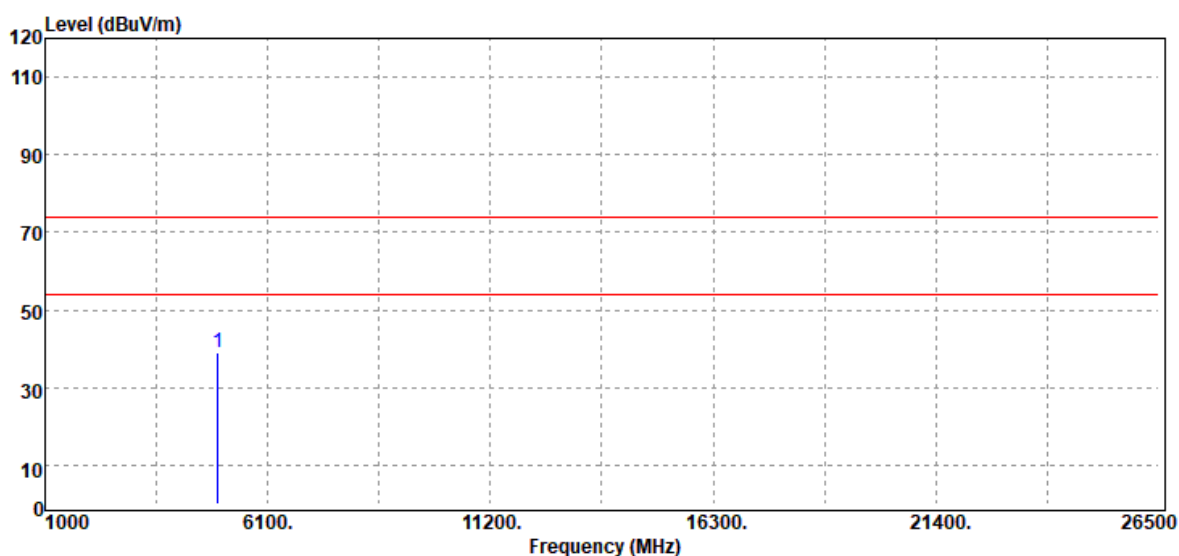
| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4882.00      | Peak                         | 49.79                             | -11.05       | 38.74                  | 74.00                  | -35.26       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

#### Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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|            |                           |               |                   |
|------------|---------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>High CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Harmonic                  | Test Date     | December 03, 2020 |
| Polarize   | Vertical                  | Test Engineer | Ray Li            |
| Detector   | Peak                      |               |                   |



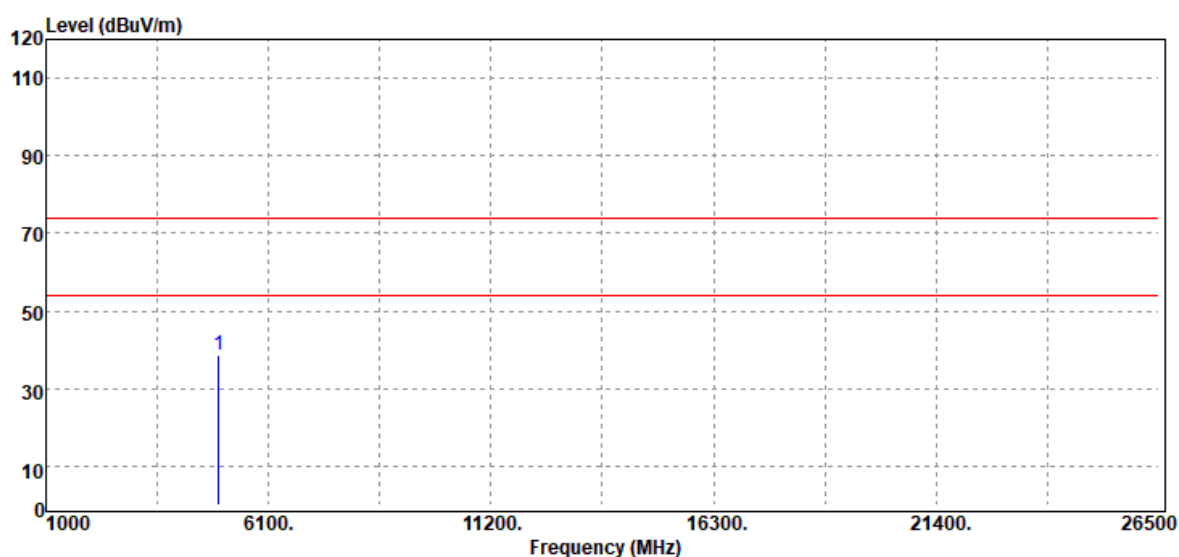
| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4960.00      | Peak                         | 49.44                             | -10.49       | 38.95                  | 74.00                  | -35.05       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200522D10-RP1

|            |                           |               |                   |
|------------|---------------------------|---------------|-------------------|
| Test Mode: | GFSK_BDR-1Mbps<br>High CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item  | Harmonic                  | Test Date     | December 03, 2020 |
| Polarize   | Horizontal                | Test Engineer | Ray Li            |
| Detector   | Peak                      |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4960.00      | Peak                         | 48.95                             | -10.49       | 38.46                  | 74.00                  | -35.54       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

**Remark:**

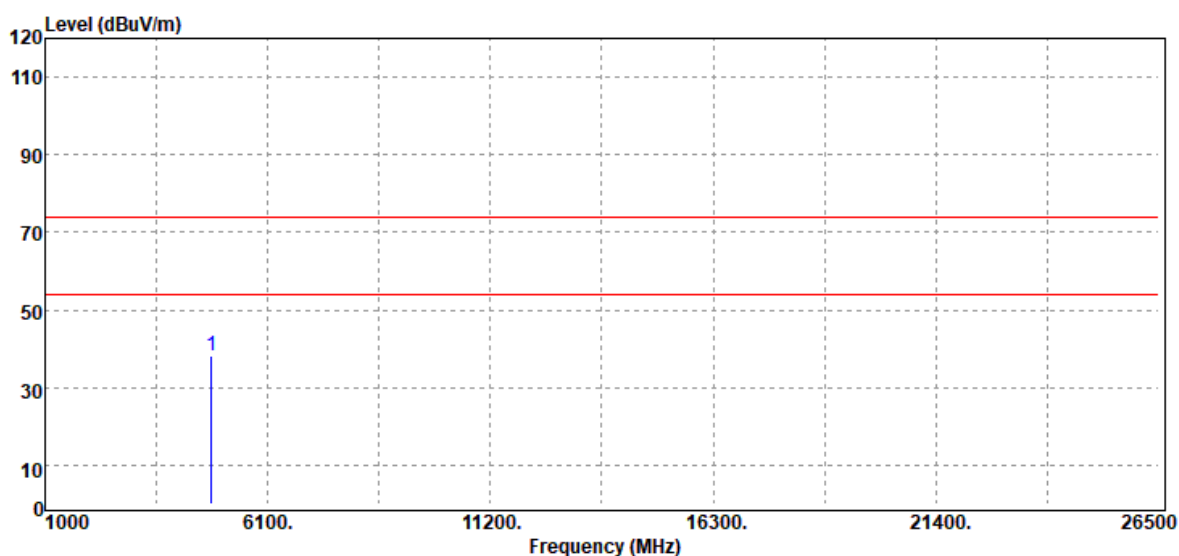
1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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|           |                           |               |                   |
|-----------|---------------------------|---------------|-------------------|
| Test Mode | 8DPSK_EDR-3Mbps<br>Low CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item | Harmonic                  | Test Date     | December 03, 2020 |
| Polarize  | Vertical                  | Test Engineer | Ray Li            |
| Detector  | Peak                      |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4804.00      | Peak                         | 49.73                             | -11.45       | 38.28                  | 74.00                  | -35.72       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

**Remark:**

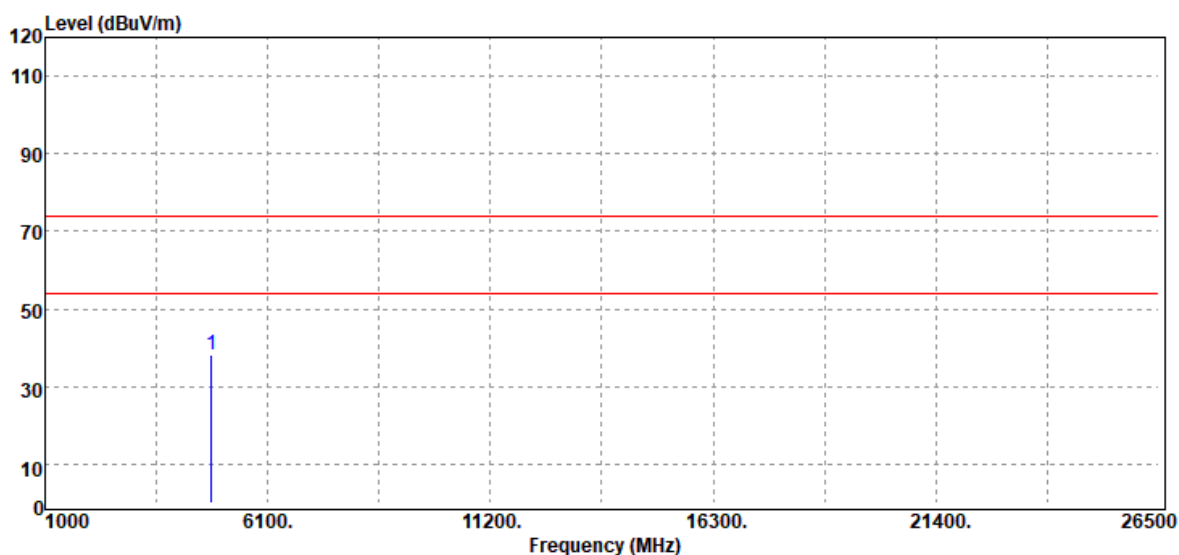
1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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|           |                           |               |                   |
|-----------|---------------------------|---------------|-------------------|
| Test Mode | 8DPSK_EDR-3Mbps<br>Low CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item | Harmonic                  | Test Date     | December 03, 2020 |
| Polarize  | Horizontal                | Test Engineer | Ray Li            |
| Detector  | Peak                      |               |                   |



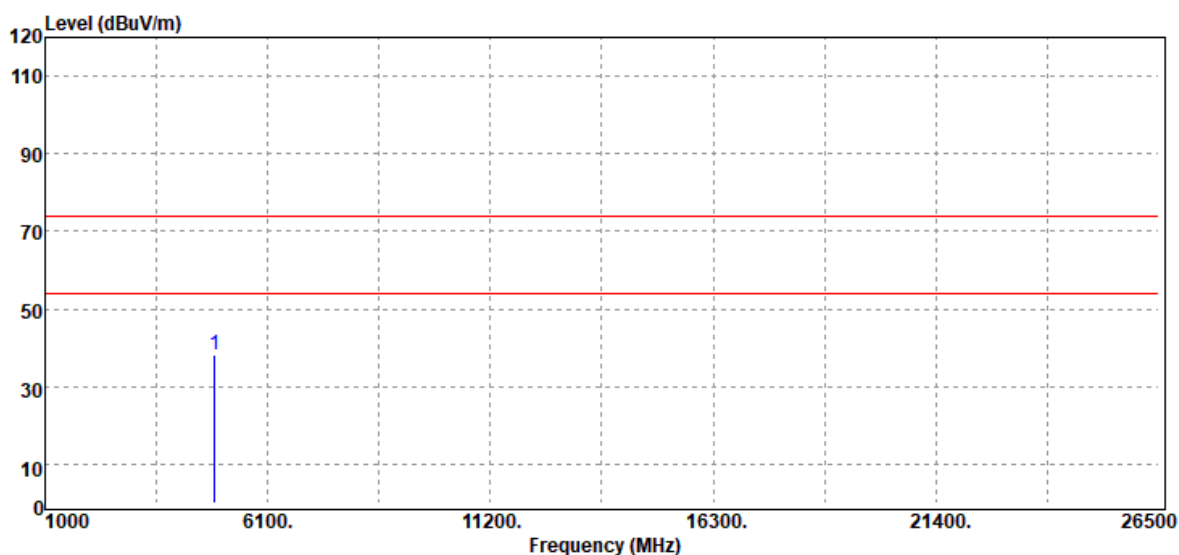
| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4804.00      | Peak                         | 49.67                             | -11.45       | 38.22                  | 74.00                  | -35.78       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200522D10-RP1

|           |                           |               |                   |
|-----------|---------------------------|---------------|-------------------|
| Test Mode | 8DPSK_EDR-3Mbps<br>Mid CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item | Harmonic                  | Test Date     | December 03, 2020 |
| Polarize  | Vertical                  | Test Engineer | Ray Li            |
| Detector  | Peak                      |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4882.00      | Peak                         | 49.39                             | -11.05       | 38.34                  | 74.00                  | -35.66       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

**Remark:**

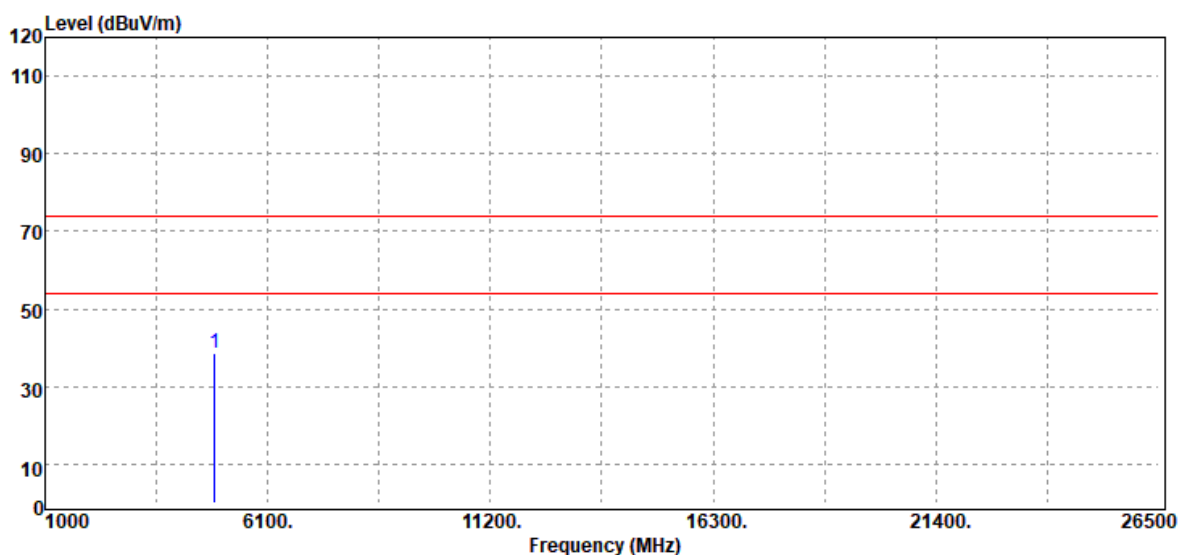
1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

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|           |                           |               |                   |
|-----------|---------------------------|---------------|-------------------|
| Test Mode | 8DPSK_EDR-3Mbps<br>Mid CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item | Harmonic                  | Test Date     | December 03, 2020 |
| Polarize  | Horizontal                | Test Engineer | Ray Li            |
| Detector  | Peak                      |               |                   |



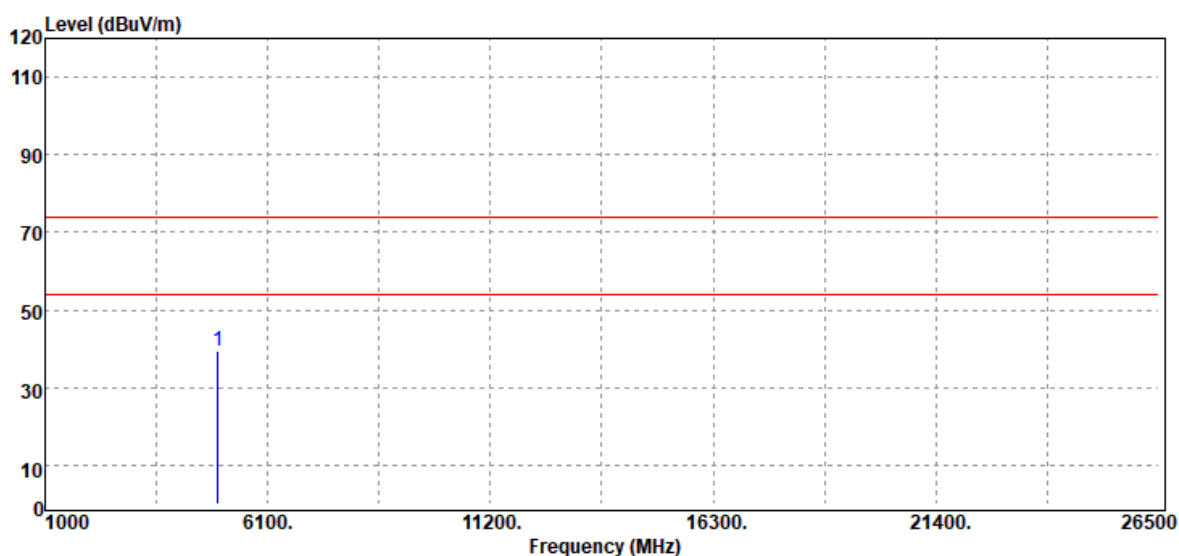
| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4882.00      | Peak                         | 49.63                             | -11.05       | 38.58                  | 74.00                  | -35.42       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200522D10-RP1

|           |                            |               |                   |
|-----------|----------------------------|---------------|-------------------|
| Test Mode | 8DPSK_EDR-3Mbps<br>High CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item | Harmonic                   | Test Date     | December 03, 2020 |
| Polarize  | Vertical                   | Test Engineer | Ray Li            |
| Detector  | Peak                       |               |                   |



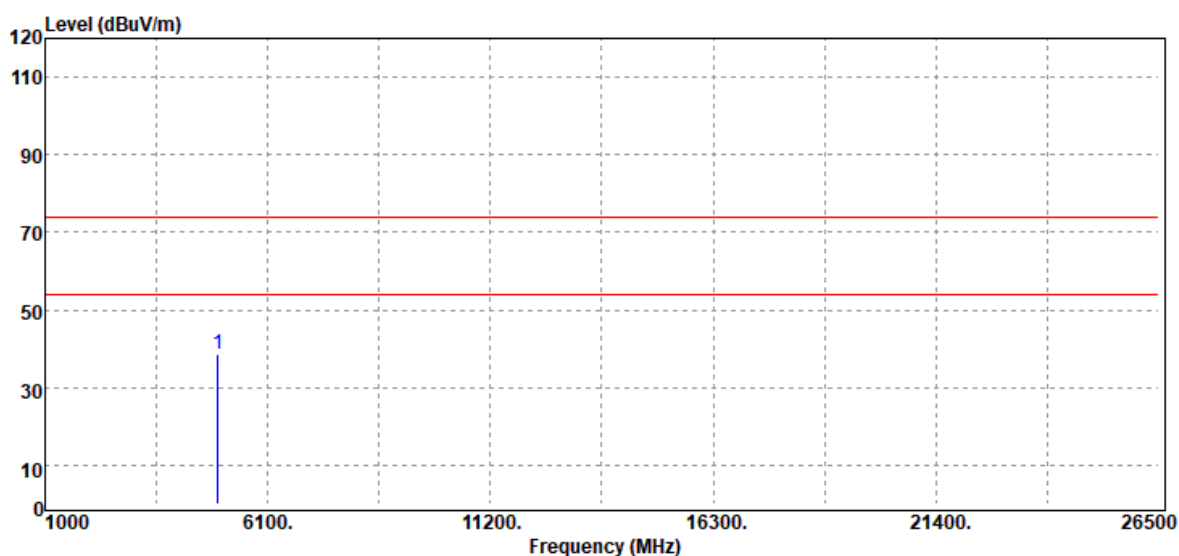
| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4960.00      | Peak                         | 49.82                             | -10.49       | 39.33                  | 74.00                  | -34.67       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz,the EUT peak value was under average limit, therefore the Average value compliance with the average limit

Report No.: T200522D10-RP1

|           |                            |               |                   |
|-----------|----------------------------|---------------|-------------------|
| Test Mode | 8DPSK_EDR-3Mbps<br>High CH | Temp/Hum      | 22.0(°C)/ 56%RH   |
| Test Item | Harmonic                   | Test Date     | December 03, 2020 |
| Polarize  | Horizontal                 | Test Engineer | Ray Li            |
| Detector  | Peak                       |               |                   |



| Freq.<br>MHz | Detector<br>Mode<br>PK/QP/AV | Spectrum<br>Reading Level<br>dBμV | Factor<br>dB | Actual<br>FS<br>dBμV/m | Limit<br>@3m<br>dBμV/m | Margin<br>dB |
|--------------|------------------------------|-----------------------------------|--------------|------------------------|------------------------|--------------|
| 4960.00      | Peak                         | 49.18                             | -10.49       | 38.69                  | 74.00                  | -35.31       |
| N/A          |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |
|              |                              |                                   |              |                        |                        |              |

**Remark:**

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. For above 1GHz, the EUT peak value was under average limit, therefore the Average value compliance with the average limit

**- End of Test Report -**